The NATIONAL GEOGRAPHIC MAGAZINE

Vol. XIX SEPTEMBER, 1908 No. 9

CONTENTS

Wonderful Sights in the Andean Highlands. By Harriet Chalmers Adams. Illustrated.

Holland, as Seen from a Dutch Window. By James Howard Gore, Ph. D. Illustrated.

How the World is Shod. Illustrated.

Peasant Life in the Black Forest. By Karl Frederick Geiser. Illustrated.

Ten Years of the Peary Arctic Club. By Herbert L. Bridgman. Illustrated.

PUBLISHED BY THE NATIONAL GEOGRAPHIC SOCIETY
HUBBARD MEMORIAL HALL
WASHINGTON, D. C.

SUBSCRIPTION, $2.50 A YEAR SINGLE NUMBER, 25 CENTS

Entered at the Post-Office at Washington, D. C., as Second-Class Mail Matter
Copyright, 1908, by the National Geographic Society, Washington, D. C. All rights reserved

THE NATIONAL GEOGRAPHIC MAGAZINE

Copyright, 1908, by the National Geographic Society, Washington, D. C. All rights reserved

AN ILLUSTRATED MONTHLY, published by the NATIONAL GEOGRAPHIC SOCIETY. All editorial communications should be addressed to GILBERT H. GROSVENOR, Editor the NATIONAL GEOGRAPHIC MAGAZINE. Business communications should be addressed to the National Geographic Society.

25 CENTS A NUMBER; SUBSCRIPTION $2.50 A YEAR

Editor: GILBERT H. GROSVENOR

Associate Editors

MAJ. GEN. A. W. GREELY
U. S. Army

C. HART MERRIAM
Chief of the Biological Survey, U. S. Department of Agriculture

WILLIS L. MOORE
Chief of the Weather Bureau, U. S. Department of Agriculture

O. H. TITTMANN
Superintendent of the U. S. Coast and Geodetic Survey

O. P. AUSTIN
Chief of the Bureau of Statistics, Department of Commerce and Labor

ROB'T HOLLISTER CHAPMAN
U. S. Geological Survey

DAVID G. FAIRCHILD
Agricultural Explorer of the Department of Agriculture

ALEXANDER GRAHAM BELL
Washington, D. C.

DAVID T. DAY
U. S. Geological Survey

R. D. SALISBURY
University of Chicago

G. K. GILBERT
U. S. Geological Survey

ALEXANDER McADIE
Professor of Meteorology, U. S. Weather Bureau, San Francisco

ALMON GUNNISON
President St Lawrence University

Hubbard Memorial Hall, Washington, D. C.

THE

HAMILTON WATCH

The National Timekeeper of America

Designed by the Best Watch Talent in the Country
Built of the Very Finest Material
Made by Workmen of the Highest Skill
Produced in a Factory of Perfect Equipment
Scientifically and Exhaustively Tested
Perfectly and Accurately Adjusted Isochronally to Temperature and to Positions
Distinguished for Supreme Time-keeping Qualities
Phenomenally Durable

Every Hamilton Watch Carries the Personal Guarantee of the Company

OUR 940 18-Size Open-face Watch is the wonderful railroad watch. Used in overwhelming numbers on all the main railroad lines in the United States.

OUR 960 16-Size Bride Watch is beautiful and accurate.

We shall soon issue a perfect Watch O Size.

Any one wishing more information, address

The HAMILTON WATCH CO.

LANCASTER, PA.

Your courtesy in mentioning the Magazine when writing will be appreciated

Office Hours, 9 A. M. to 4.30 P. M. Telephone, North 306

NATIONAL GEOGRAPHIC SOCIETY

Hubbard Memorial Hall
Sixteenth and M Streets, Washington, D. C.

WILLIS L. MOORE . . . . President — O. P. AUSTIN . . . Secretary
JOHN JOY EDSON . . . . Treasurer — HENRY GANNETT . . . Vice-President
GILBERT H. GROSVENOR . . . Editor — F. B. EICHELBERGER . Asst. Treasurer
JOHN OLIVER LA GORCE . Asst. Secretary

BOARD OF MANAGERS

1906-1908	1907-1909	1908-1910
O. P. AUSTIN	HENRY F. BLOUNT	ALEXANDER GRAHAM BELL
CHARLES J. BELL	C. M. CHESTER	HENRY GANNETT
T. C. CHAMBERLIN	F. V. COVILLE	J. HOWARD GORE
GEORGE DAVIDSON	D. C. GILMAN	A. W. GREELY
JOHN JOY EDSON	RUDOLPH KAUFFMANN	GILBERT H. GROSVENOR
DAVID G. FAIRCHILD	T. L. MACDONALD	GEORGE OTIS SMITH
A. J. HENRY	WILLIS L. MOORE	O. H. TITTMANN
C. HART MERRIAM	S. N. D. NORTH	JOHN M. WILSON

Please detach and fill in blank and send to the Secretary

Recommendation for Membership in the

NATIONAL GEOGRAPHIC SOCIETY

The membership fee includes subscription to the National Geographic Magazine

DUES: Annual membership in U. S., $2.00; annual membership abroad, $3.00; Canada, $2.50; life membership, $50. Please make remittances payable to National Geographic Society, and if at a distance remit by N. Y. draft, postal or express order.

.....*1908*

To the Secretary, National Geographic Society,
Washington, D. C.:

I nominate .....

Address: .....

.....

for membership in the Society.

.....

.....
(Write your address.)

XUM

Buffalo & Susquehanna Iron Company

TWENTY-YEAR 5 PER CENT. DEBENTURE GOLD BONDS

Mature January 1, 1926 **Interest March and September**

LISTED ON THE NEW YORK STOCK EXCHANGE

The Company controls its entire raw material requirements—iron ore, coke and coal.

The value of the Company's properties is more than five times the amount of its funded debt.

Earnings available for payment of bond interest in the fiscal year just closed were five times the total amount required for that purpose.

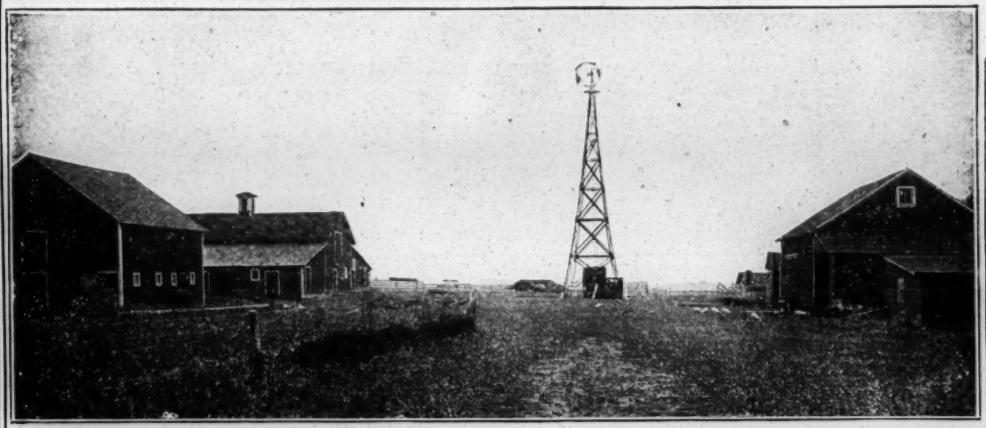
We offer a limited amount of the above bonds at a price to return about 5½ PER CENT. yearly on the sum invested.

Write for special circular

FISK & ROBINSON

BOSTON	NEW YORK	CHICAGO
28 State Street	35 Cedar Street	135 Adams Street

THOMPSON FARM MORTGAGES



Farms like this are the best security known, and mortgages secured by them are the best investment for your funds. My loans do not exceed 50% of the value of the land, exclusive of the buildings. I place information at your disposal so that you can know all about your security.

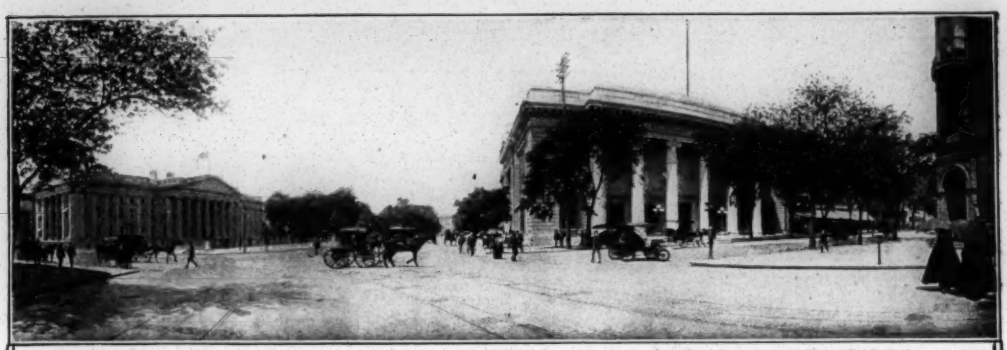
Write me for full particulars.

REFERENCES:
MERCHANTS NAT. BANK
CAPITAL NAT. BANK, BOTH OF ST. PAUL, MINN.

MACKEY J. THOMPSON
514 PIONEER PRESS BLDG. ST. PAUL, MINN.

ABSOLUTE SECURITY

Your courtesy in mentioning the Magazine when writing will be appreciated



Treasury Building — American Security and Trust Co. Building

MONEY FOR USE IN TRAVELING

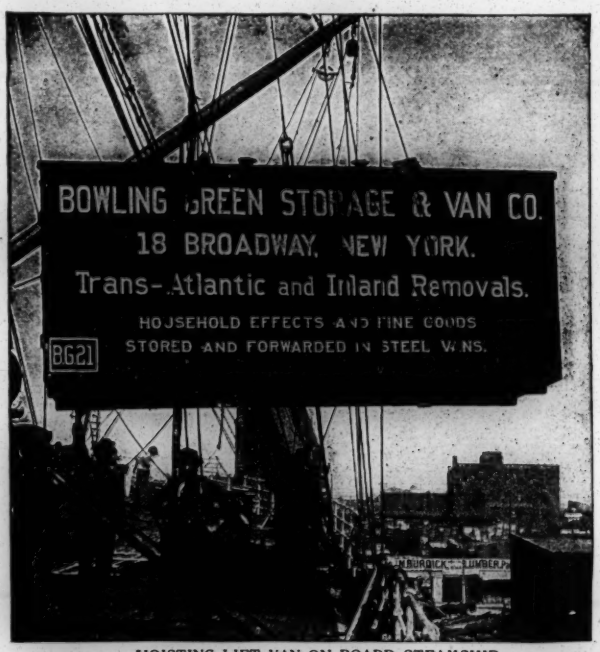
LETTERS OF CREDIT
INTERNATIONAL CHEQUES — EXPRESS CHECKS
FOREIGN DRAFTS — CABLE TRANSFERS

American Security and Trust Co.

N.W. Corner Fifteenth Street and Pennsylvania Avenue
Opposite United States Treasury

DEPOSITS INVITED — INTEREST ALLOWED

The Capital Surplus and $7,700,000. Stockholders Liability


BOWLING GREEN STORAGE & VAN CO.
18 BROADWAY, NEW YORK.
Trans-Atlantic and Inland Removals.
HOUSEHOLD EFFECTS AND FINE GOODS
STORED AND FORWARDED IN STEEL VANS.
BG21

HOISTING LIFT-VAN ON BOARD STEAMSHIP

LIFT-VANS will be provided for prompt loading in any city of the United States or of Europe.

¶ In no other way can Household Goods be moved across the ocean, in absolute security, with despatch and economy.

BOXING NOT REQUIRED

IN WASHINGTON, APPLY TO

Security Storage Co.

1140 Fifteenth Street N.W.

BOWLING GREEN STORAGE AND VAN COMPANY

18 Broadway, New York

Cable Address: Bowlingvan, New York — Codes: A B C, Fifth Edition, Lieber's Code

Your courtesy in mentioning the Magazine when writing will be appreciated

XUM

VOL. XIX, No. 9 WASHINGTON SEPTEMBER, 1908

THE NATIONAL GEOGRAPHIC MAGAZINE

SOME WONDERFUL SIGHTS IN THE ANDEAN HIGHLANDS

The Oldest City in America. Sailing on the Lake of the Clouds: The Yosemite of Peru

BY HARRIET CHALMERS ADAMS

With photographs by the author

AS the train steamed away, leaving us in the little Andean village of thatched mud huts, I pinched myself to make sure I was awake. We were in Tiahuanaco, an Indian hamlet, situated on that bleak upland plain of Bolivia which the traveler must cross to reach La Paz, the capital. From Lake Titicaca we had journeyed in a modern railway coach, but with the departure of the train seemed to have dropped back five hundred years. "No trace here of Spanish invasion," I said; but just then we came upon a street shrine and a stone cross, and were reminded that these highland Indians are no longer sun-worshipers.

Passing through the village, we reached the ruins of Tiahuanaco, pre-Incasic—"beyond the reach of history and tradition" even in those days when the ancient Inca Fortress of Sacsahuaman was erected on a hill overlooking Cuzco. These ruins mark the site of the oldest city in the New World, and from under the drifting sand of centuries a civilization still more remote than that of Tiahuanaco may yet be brought to light on the Andean plateau.

Tiahuanaco is in the very heart of the region known as the Tibet of the Western World. It lies on a plain which is over twelve thousand feet above the level of the sea, a plain from which rises the lofty *Cordillera,* the third and great range of the Andes. Journeying eastward from Lake Titicaca, we crossed an open, unprotected country, wind-swept, barren. The thatched villages and adobe-walled corrals looked as dreary and colorless as the desolate *Puna* itself. Yet here, archæologists tell us, flourished the most advanced of the ancient American civilizations.

In the Tiahuanaco of today beautifully cut stones brought from the near-by ruins form a part of the church built by the early Spaniards. To neighboring vil-

A DOORWAY CARVED OUT OF A SINGLE BLOCK OF STONE IN THE PRE-INCASIC TEMPLE AT TIAHUANACO, PERU
(SEE PAGE 599)

lages, and even as far as to La Paz, the capital, these great stones were carried to be used as foundations of churches erected in the faith of the conquerors.

The ruins lie on a level part of the plain where the soil is firm and dry. They consist of rows of stones, sections of foundations, carved doorways, portions of stairways, vast masses of rock, but partially hewn. No mortar was used in the construction, yet these stones were so skillfully cut and fitted that the foundations have outlived the centuries. They are of red sandstone, slate-colored trachyte, and dark basalt transported from quarries many miles away. Later, in the ancient Peruvian fortresses, we saw wonderfully cut and massive stones, but none with the carved ornamentation found here.

The most remarkable monument is the monolithic gateway which, although broken at the time of our visit three years ago, was still standing. A friend who visited the ruins last year tells me that the Mighty is now fallen. As we saw it, a doorway about four and a half feet high and two and a half feet wide was cut out of a great block of stone over seven feet high, thirteen feet wide, and eighteen inches thick. (See illustration on page 598.) Above the doorway, four rows of carving, a central figure sculptured in high relief. It is claimed by students of antiquity that no better piece of stone-cutting exists. The figures in the rows of carving have human bodies, feet, and hands, but are winged, and some have the heads of condors; others, with human heads, wear crowns and carry scepters. All of these smaller figures seem to be kneeling in worship of the large raised figure, which also is crowned and sceptered, and decorated with the heads of condors and tigers, symbolic of strength and power.

As I gazed on this quaint doorway, unique on this continent, a picture came to me of the metropolis which it once graced. The massive wall of which it formed a part rose before me, a wall surrounding a populous city, contemporaneous with the ancient capitals of

IN THE RUINS OF THE OLDEST CITY IN THE NEW WORLD, TIAHUANACO

Egypt and the East. I did not feel as confident of our triumphant modern civilization as I stood in the shadow of this hoary gateway. "History repeats itself," the thought came to me; "civilizations rise and fall." Which of the mighty edifices now standing in America will testify to our nation's greatness in the centuries to come?

I still felt that we were linked with the past as we walked back to the village of Tiahuanaco. In fact, throughout the Andean highlands the traveler feels transported to centuries gone by. The coast cities of Peru are progressing rapidly; in Lima one can now live quite as comfortably as in New York. In the uplands, however, wander a bit off the beaten path and there are only the village

RUINS OF THE TEMPLE, TIAHUANACO

church towers to remind one of the years that have passed since Pizarro sailed south from Panamá. The mountaineers of Peru are still, in greater part, full-blooded *Quichuas,* descendants of the Inca tribes. After crossing Lake Titicaca, we found the *Aymarás,* descendants of a people conquered by the Incas shortly before the coming of the Spaniards.

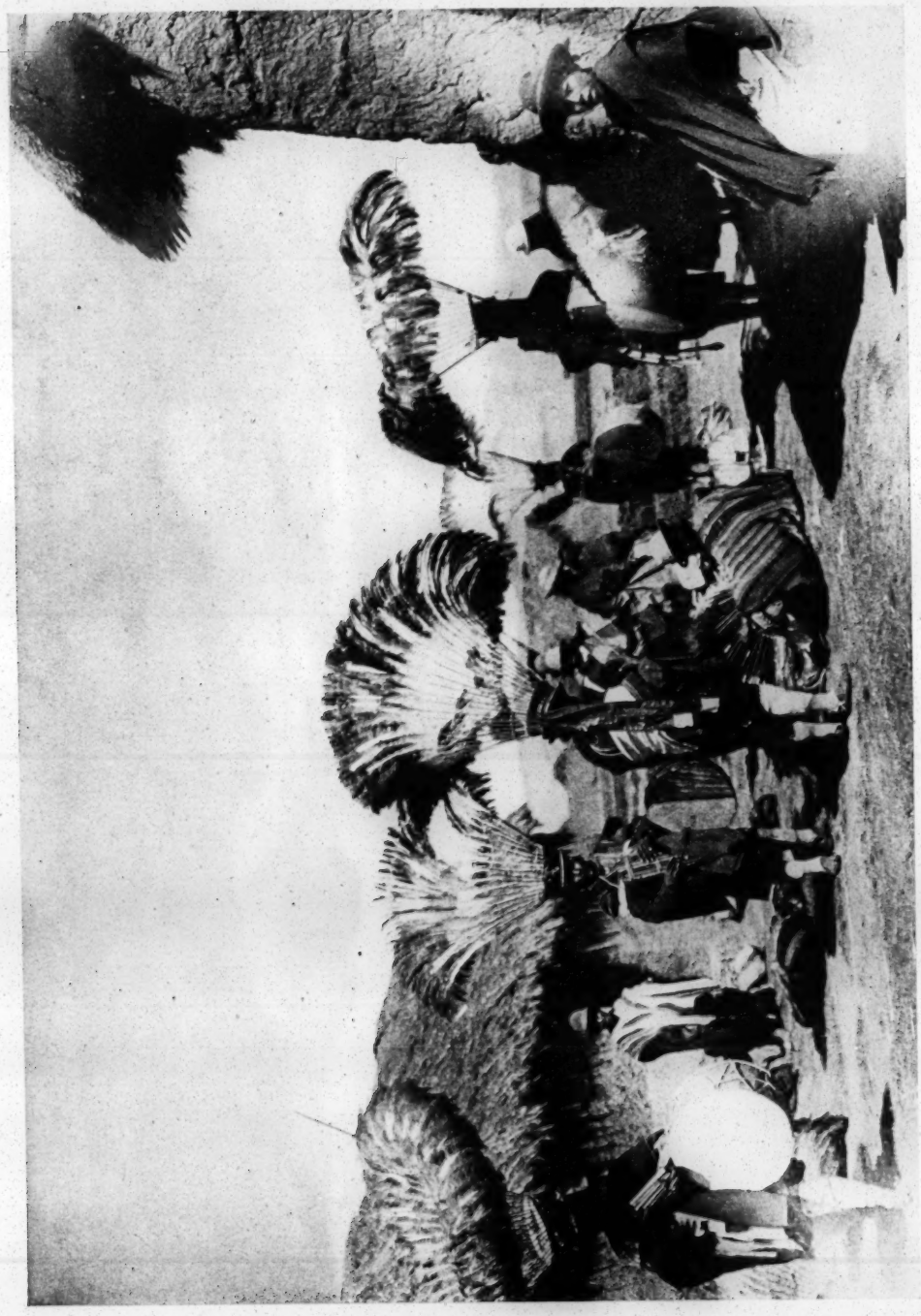
In the Andean country the head-dress changes with the locality. In Tiahuanaco the belles exhibit a remarkable headgear, reminding me of that worn by pictured, top-heavy, ill-fated British queens. The hat consists of a stiff, coffin-shaped piece of pasteboard covered with red or blue cloth and tinsel; hung around this is a deep valance as a protection from sun and wind.

The men here are not to be outdone, and on feast days come forth in head covering that would put even this season's "Merry Widows" to shame. Multicolored macaw feathers, colored cloth, and tinsel combine to dazzle the beholder, and as the revelers march down the village street, blowing on reed pipes and beating drums, they are accompanied by a score of half-naked children and a few dozen barking dogs. The children are always dirt-covered, the dogs always lean and savage, and the players always imbibe too freely of *chicha,* ending the day in a drunken carouse. I always worried about the hats, fearing they wouldn't be in good condition for the next feast day.

It is bitterly cold in Tiahuanaco, but the natives, both men and women, are scantily clad, and go bare-legged. They believe in keeping the head warm, however, and tie bands of cloth, woven from llama wool, over their hair underneath

WOMEN OF THE TIAHUANACO OF TODAY

THE VILLAGE BAND, TIAHUANACO



GAUDY HATS WORN BY THE MEN OF TIAHUANACO AT FIESTAS (SEE PAGE 600)

their hats. They sleep on the ground in unfurnished huts, and live principally on *chuño*, the frozen potato, and *cholona*, dried goat or mutton. As we returned to Lake Titicaca, we looked out on the highway which parallels the railroad, and saw Aymarás driving their llama trains and laden burros. In the fields were the shepherds, often mere lads, playing on reed pipes as they watched their flocks of sheep, goats, or alpacas. Glorifying the dreary landscape, the *Cordillera de los Andes* towered to the northward, the jagged peaks of Illampu rising to twenty-three thousand feet above the sea.

THE LAKE OF THE CLOUDS

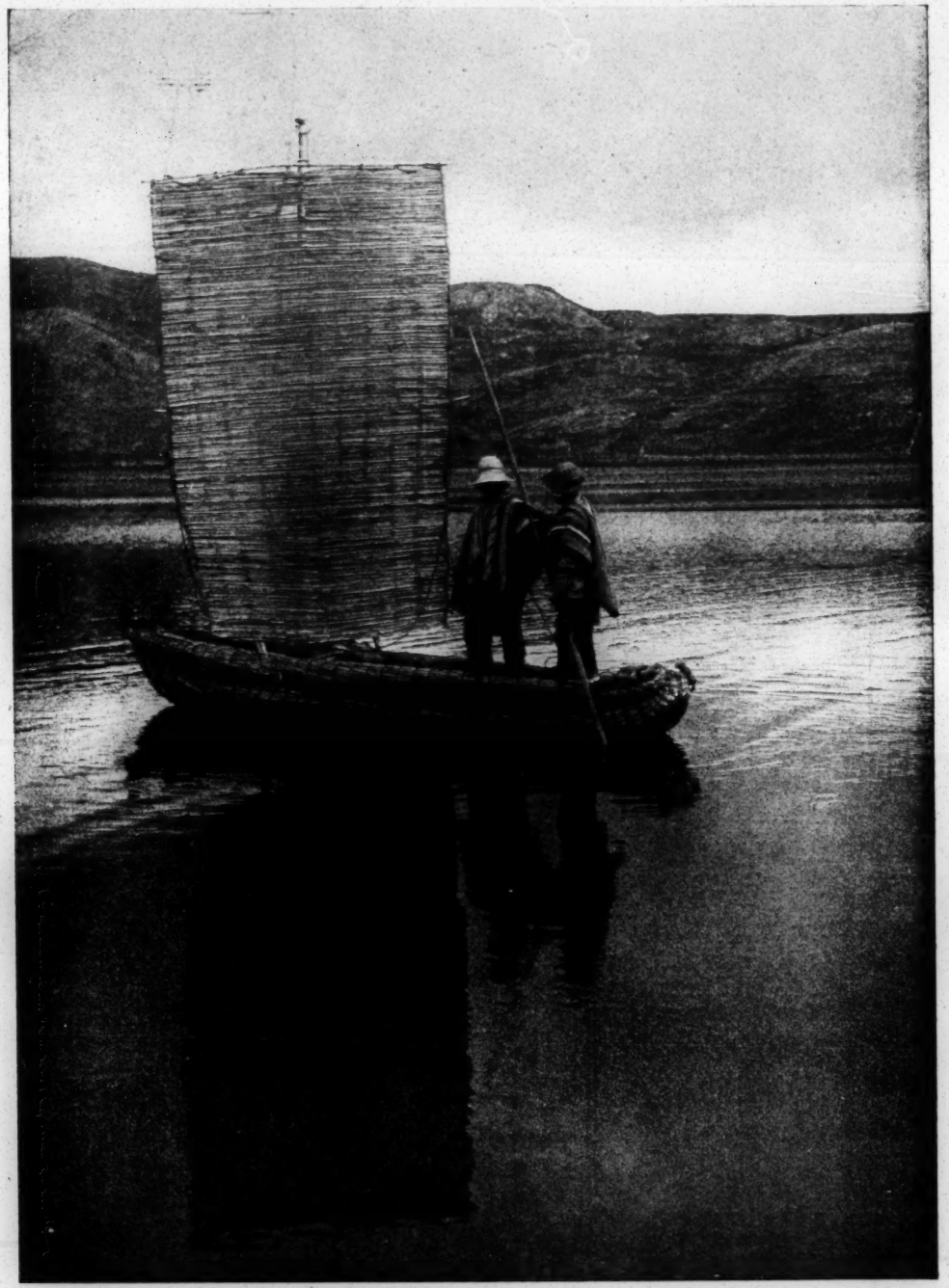
Lake Titicaca is in many respects the most extraordinary body of water in the world. It is the highest lake on earth which is steam navigated, and the grandeur of the mountains which surround it and the romantic legends which encircle it combine to make this Lake of the Clouds most interesting to the traveler. In shape it is long and irregular; its extreme length is one hundred and twenty miles; its width sixty miles, and its elevation twelve thousand five hundred feet above the sea. The lake is of great depth and never freezes over, although ice forms in places near the shore where the water is shallow.

In color it is dark blue, shimmering in the sunlight, and its brown islands look like a topaz necklace on a sapphire-colored gown. Titicaca is a border lake between Peru and Bolivia, and it is on the Bolivian shore that the Andes sweep in a crescent across the horizon. Illampu, or Sorata, is the most majestic of the peaks, but in crossing the lake we saw an uninterrupted chain of mighty *nevados* stretching from Illampu to the graceful Illimani, the beautiful White Lady which overlooks the picturesque city of La Paz.

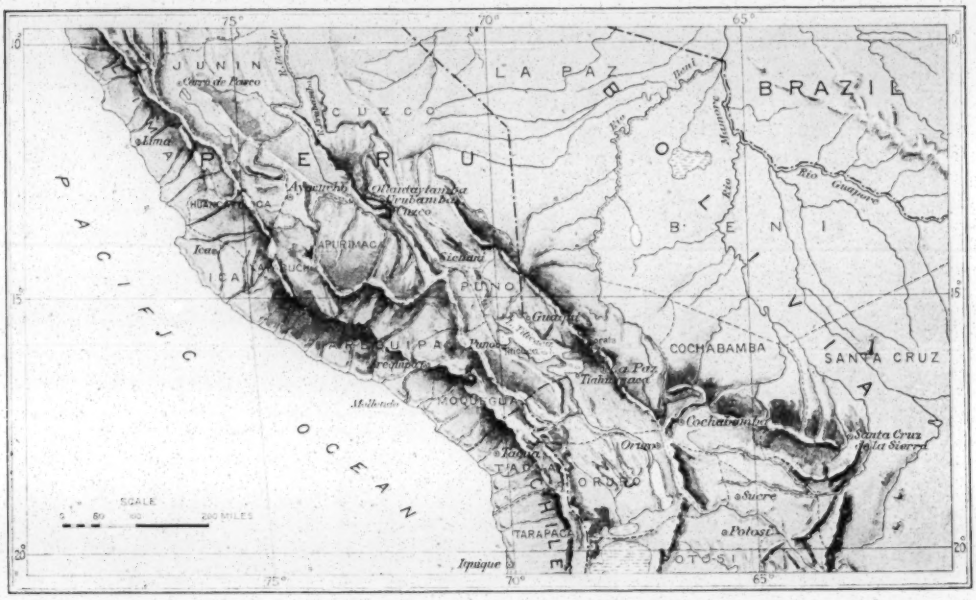
Of the eight large islands in the lake, Titicaca and Coati are the most historic. To the ancient Peruvians they were sacred islands in the worship of the sun and the moon. To Titicaca, Island of the Sun, the Peruvians traced their origin—the same Adam and Eve story which we find the world over. From Titicaca the first Inca and his wife—so runs the legend—started forth to the northwest to found Cuzco, Sacred City of the Sun. There are ruins on a number of the islands, and tombs of Inca chiefs near by on the mainland. The hillsides bordering the lake are barren, except for a few cultivated patches, but reeds and lake-weed form an emerald fringe around the shore. It is a pretty sight to see the cattle wading into the water to feed on the lake-weed, their principal food at a certain season of the year. The reeds are of great value to the natives, since out of them the *balsas* or lake boats are woven.

The rush balsa is the most picturesque feature of the landscape. The sail as well as the boat is built of woven reeds, and the balsa can be used for six months, when it becomes water-soaked, and must be abandoned. Sailing in this queer little craft proved an exciting pastime. The boat is simply a big basket made of bundles of grass tied together and shaped a little like a canoe. One is in danger of becoming very wet and very seasick. I decided that the boats are most attractive *when seen from the shore*. The Titicaca Indians wear homespun, as in years long past, and as I watched a fleet of balsas sailing out to the fishing grounds I realized that in the people, crafts, and lake itself there is little change since prehistoric days.

On our return to Peru from Bolivia we boarded a small steamer at Guaqui, and were a day crossing the lake to Puno. In the crossing to Bolivia we had been passengers on the *Cuyo*, a fairly comfortable little vessel, but on the return trip embarked on the *Yavari*, which certainly was built "when Columbus was a little boy." It was a rough and disagreeable voyage, and a number of passengers suffered from seasickness and from soroche. This mountain illness affects people differently. Some suffer from pain in the head, others from nausea, and the most dangerous form is heart failure. We escaped the trouble altogether, probably because we ascended

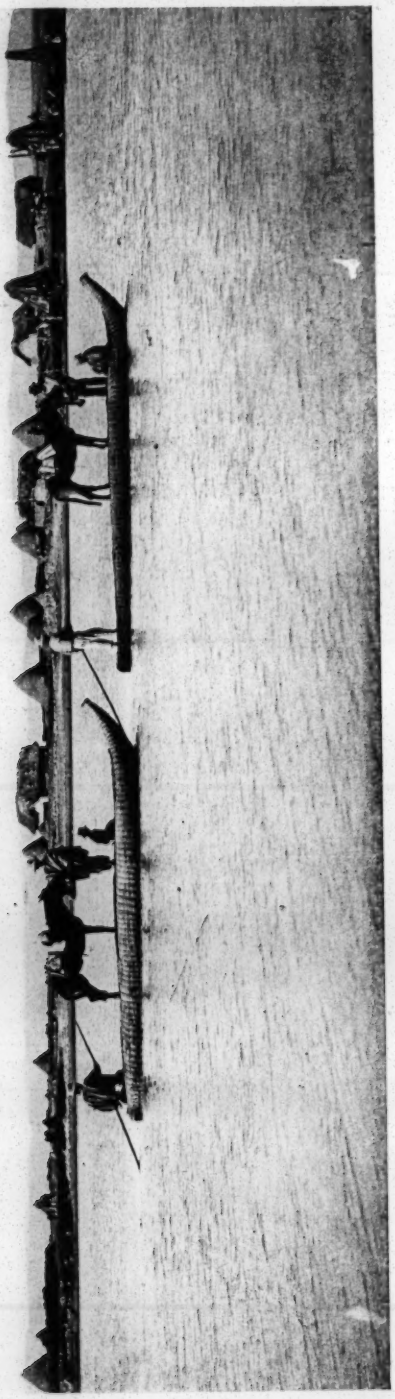


SAILING ON THE LAKE OF THE CLOUDS, 12,500 FEET
The boat and its sail are constructed of reeds



SKETCH MAP SHOWING LOCATION OF LAKE TITICACA AND ANDEAN HIGHLANDS

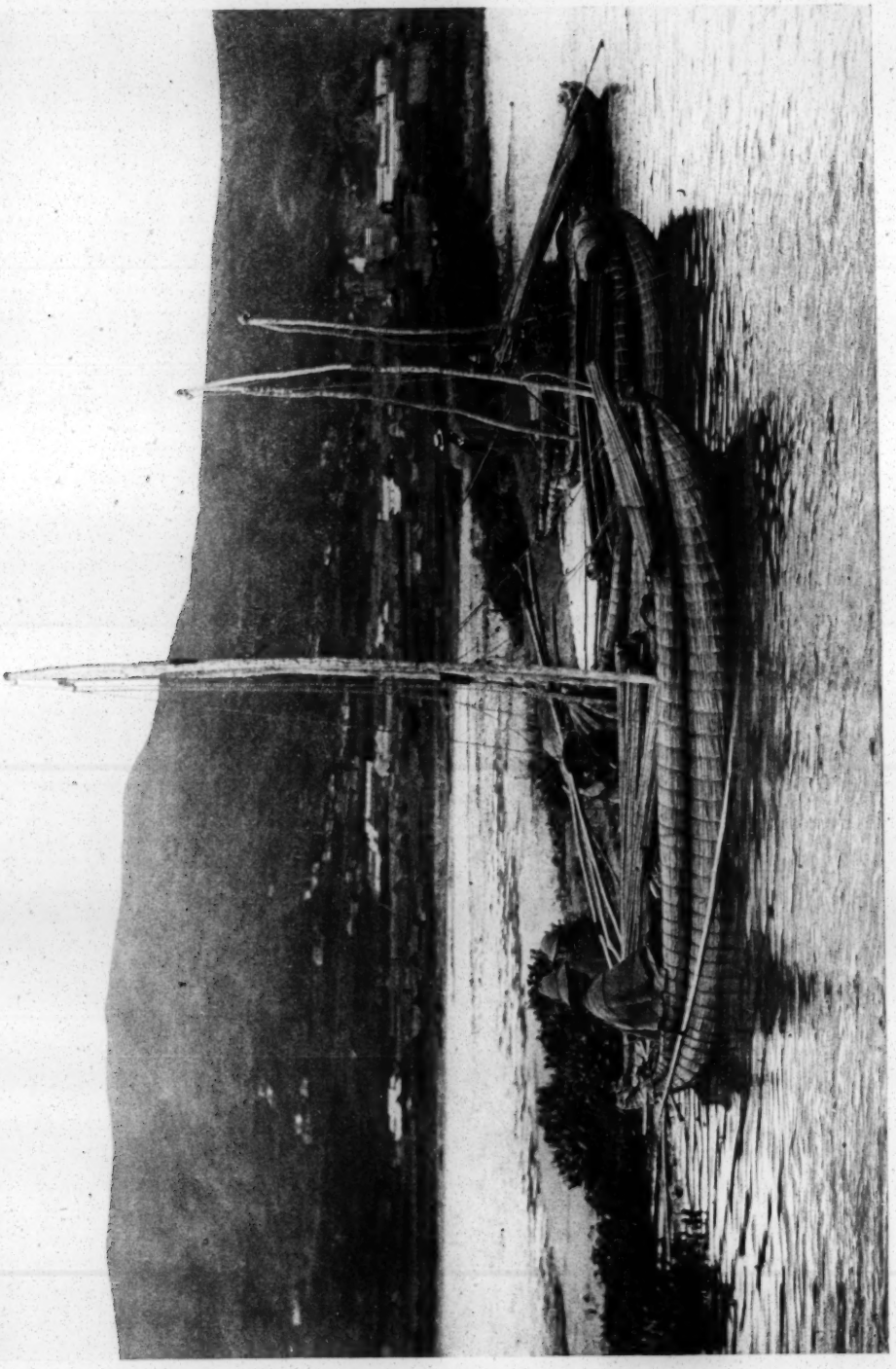
CONSTRUCTING A BALSA OF REEDS ON AN INLET OF LAKE TITICACA



FERRYING MULES IN THE REED BOATS

EMBARKING ON A BALSA

VIEW OF A PART OF THE DECK OF A BALSA



FERRYBOATS WAITING FOR A FARE, LAKE TITICACA

These reed boats last about six months and are then abandoned

to high altitudes gradually, first remaining a week at seven thousand feet, then stopping at twelve thousand, and finally reaching nineteen thousand two hundred feet without difficulty.

From Lake Titicaca we journeyed by rail to Sicuani, then the terminus of the road which is now well on to Cuzco; but when I visit Peru again, I shall journey once more by coach beyond Sicuani. By this method one can better study the life of the natives in this most romantic part of the Andean country. In a recent story* I told of our journey over the old Inca highway, and in the future will write of life in Cuzco, the ancient Mecca of the New World.†

"THE SWEETEST VALLEY IN PERU"

While in Cuzco we decided to make a journey to the Valley of Yucay, to visit the old fortresses of Ollantaytambo and Pisac. This is one of my most delightful memories of Andean travel. It was in the Valley of Yucay, "the sweetest valley in Peru," that the Incas are supposed to have built their summer palaces. We made this journey in the saddle, with only our blankets and saddle-bags, unhampered by guide or cargo mule. Starting out very early one June morning, we rode over the rocky streets of Cuzco, the city of all others in the Americas rich in its legends and history, its charming situation, and unpleasant odors. The road led up to a hilltop where we had a comprehensive view of the red-roofed town, with its many church towers and ancient plazas, overshadowed by the Fortress of Sacsahuaman, which looks down on the *bolsone*, the mountain valley, in which Cuzco lies. Facing in the opposite direction, we saw our trail leading to the Cordillera, the same snowy chain we had known as the Bolivian Andes. Now we were many miles to the north.

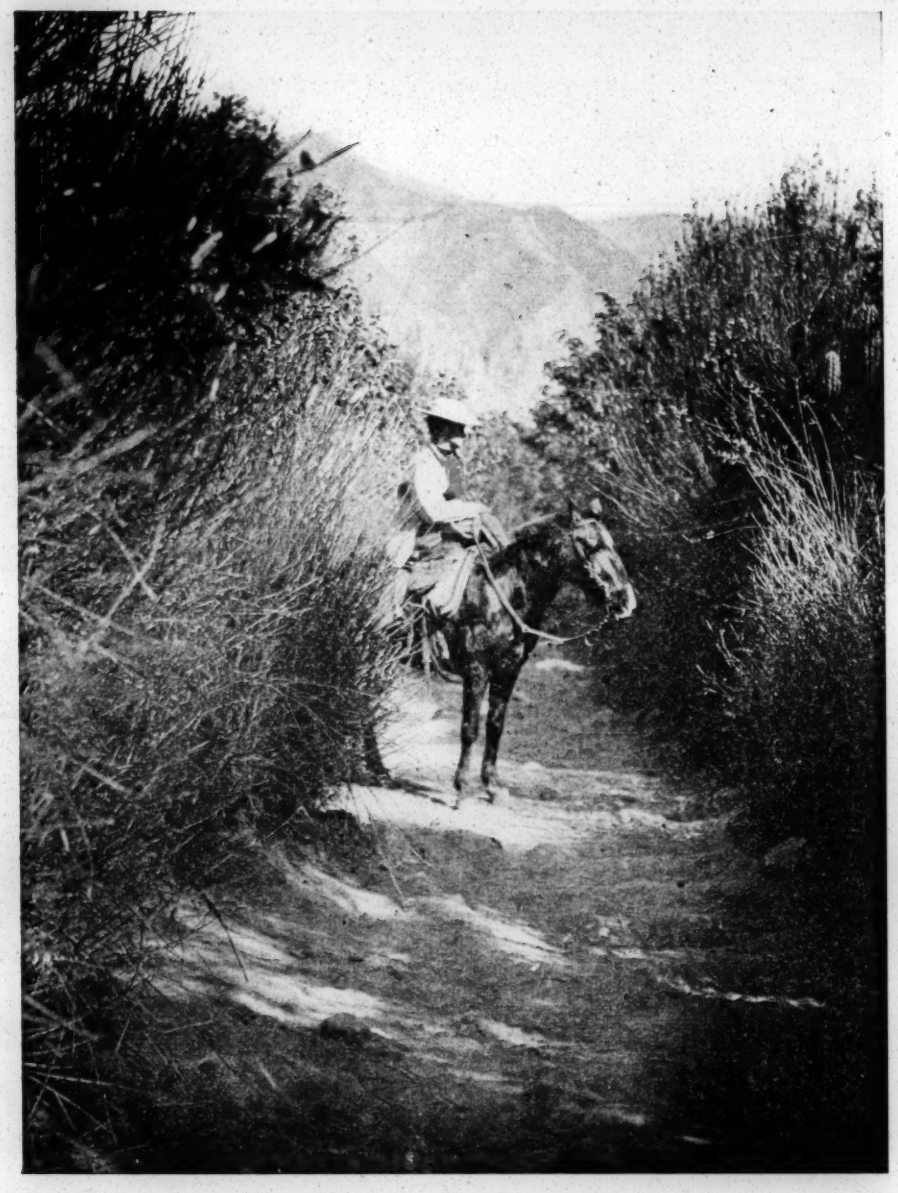
All day we traveled over the high plateau, at times on a trail, again over a portion which still remains of the Inca highway, formerly connecting Cuzco with Quito. The Inca road was formed of rough stones set into the ground, bordered by low stone walls, through which passages were cut at intervals to carry off the water. As between Sicuani and Cuzco, we met many pilgrims and llama trains, and now there were burros heavily laden with produce from the Valley of Yucay and from the more tropical valleys beyond. We had food in our saddle-bags, and went without water, observing that the passing brooks served for all village household purposes. In the late afternoon we reached Chinchero, where there are Inca ruins near a few dilapidated huts and an old Spanish chapel. Riding on, we faced the Andes, and were wondering where Yucay could be hidden, when we suddenly reached the edge of the plateau and saw the canyon-like valley four thousand feet below.

One who has stood on the heights overlooking the Yosemite Valley, in California, can form a mental picture of Yucay as seen from this elevated table land. Through the valley flows the River Yucay, which we had known above Cuzco as the Vilcanota, and which, farther on, as it flows to the king of rivers, is called the Ucayali. It is the longest formative branch of the Amazon. As in the Yosemite Valley, fertile banks mark the shores of the river, but instead of waterfalls the steep mountain walls of Yucay are covered in many places with graceful terraces of the ancients. Broad at the base, narrowing as they rise, these terraces are one thousand feet in height. So the Inca's subjects gained area for agriculture, irrigating by means of aqueducts which started at the verge of the snows.

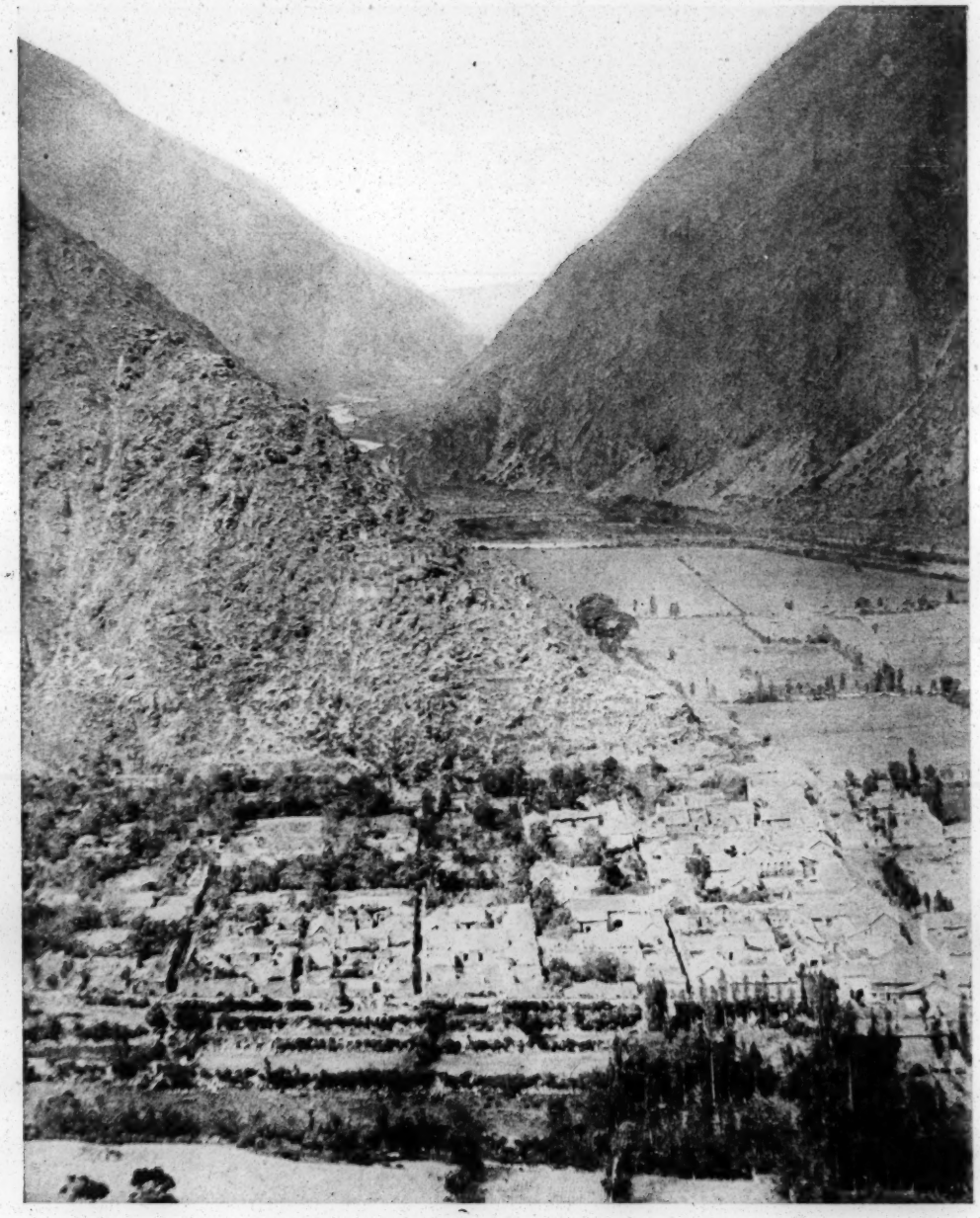
Although the floor of the valley is elevated eight thousand feet above the sea, it is so sheltered that the climate is mild and delightful. The coast, sierras, and highlands of Peru are without rain or natural verdure. It is as though Nature gave her all to the forest-covered eastern slope of the Andes. It is only where rivers break through the mountain walls and cross the deserts that the barren country to the west of the Cordillera

*Published in the April, 1908, number of the NATIONAL GEOGRAPHIC MAGAZINE.
†To be published in an early number of this Magazine.

XUM



ON THE TRAIL TO THE VALLEY OF YUCAY, BORDERED BY SPANISH BROOM



THE VALLEY OF YUCAY

blooms. To travelers long on the bleak *Puna* the Valley of Yucay seems an enchanted vale.

As we descended from the heights of Chinchero by the steep, narrow, winding trail the wonderful scenery put me into an exalted mood. I was a Quichua princess carried by my willing slaves down to the beautiful summer palace of my father, the Inca; only just then my tired

horse stumbled, and I came back to earth a dusty little Andean traveler longing for any moth-eaten *posada* where I could rest my weary head.

We found the *posada* in the village of Urubamba—every other name ends in "bamba" or "tambo" in the Quichua country—and it broke all records for uncleanliness. It wasn't an expensive resort, however; we paid something like seventy cents for our bed, a day's board, and fodder for our animals. On the trails many of the natives speak only the Quichua tongue, but in Urubamba Spanish is spoken. There are a number of merchants in the village who buy the produce as it comes up from the Lower Yucay Valley and the tropical Valley of Santa Ana, sending it on to Cuzco and to other parts of the highlands. When the tired little burros jogged into town, I was always interested in their cargo. They brought coffee beans, cacao, cocoa leaves, and tropical fruits. We saw few llamas in Yucay; the little mountain cousins of the camel are better suited to the highlands.

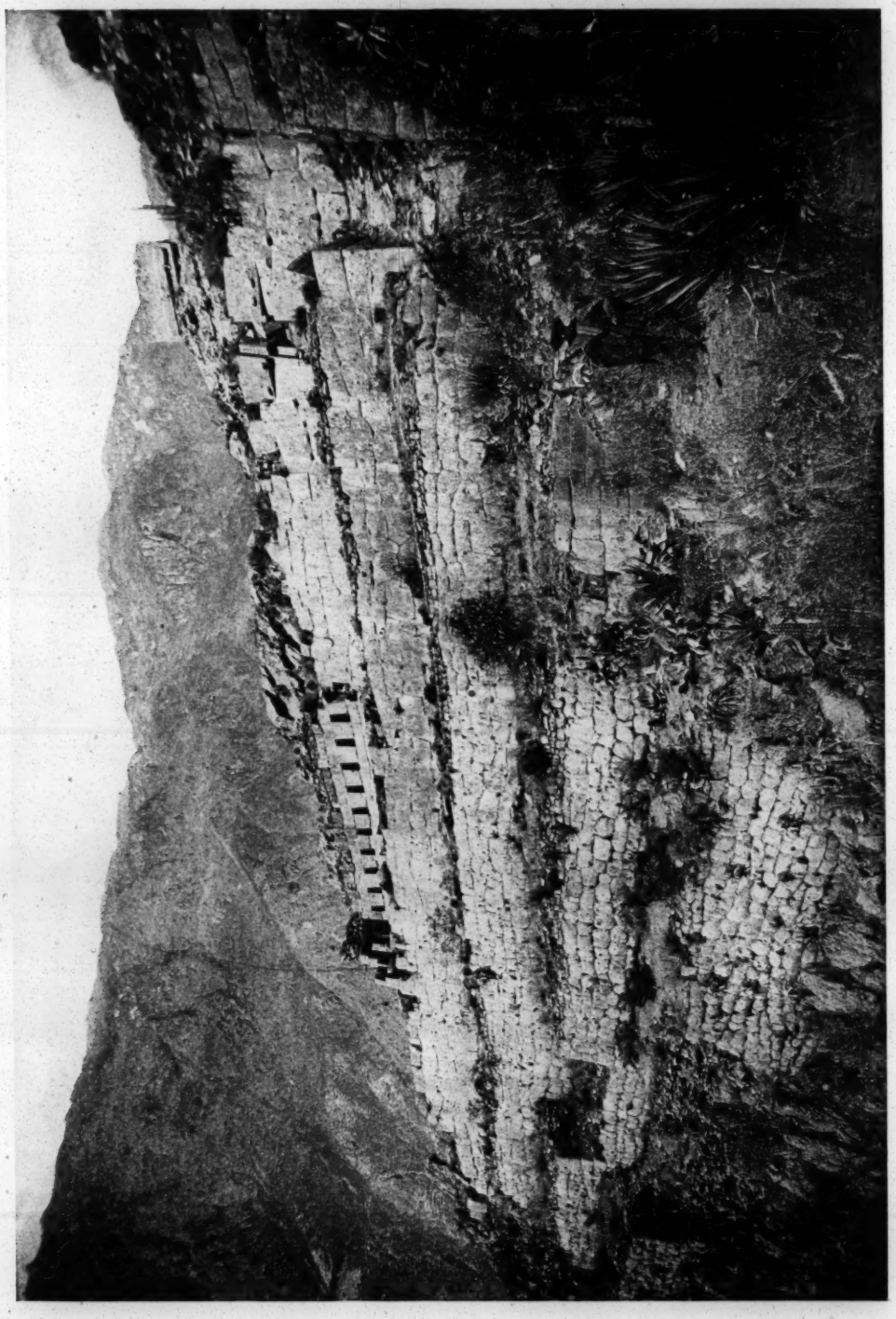
From Urubamba we rode down the valley over a trail which follows the winding river, a charming trail bordered by fragrant yellow Spanish broom and many varieties of the cactus plant, shaded by giant willows and pepper trees in ruddy blossom. Passing through peaceful villages, we came upon curving terraces and moss-hung ruins, but saw no remains of the wonderful summer palaces. I irreverently suggested that perhaps the Inca kings also yearned at times for "the simple life," and, leaving scepters and *llautus* behind, "camped out" in the restful Valley of Yucay.

Without palaces the ancients could exist, but not without fortresses, especially in this frontier country near the Andean passes leading to the vast forest which, in other days as now, was inhabited by savage tribes. A day's journey from Urubamba is the Fortress of Ollantaytambo, which guards the lower entrance of Yucay. A pretty legend is attached to the old place. Ollantay, a brave chieftain, was in love with the ruler's daughter, Cusi Coyllur, the Joyful Star. Ollantay was not of royal blood, and, being denied his lady love, made war against the Inca. He is said to have built this fortress, which he held for many years. The story ends in the good old way. At the death of the king the lovers were united, and lived happily forever after. In truth, the fort was built to safeguard the Inca's domain against the wild tribes of the *Montaña*.

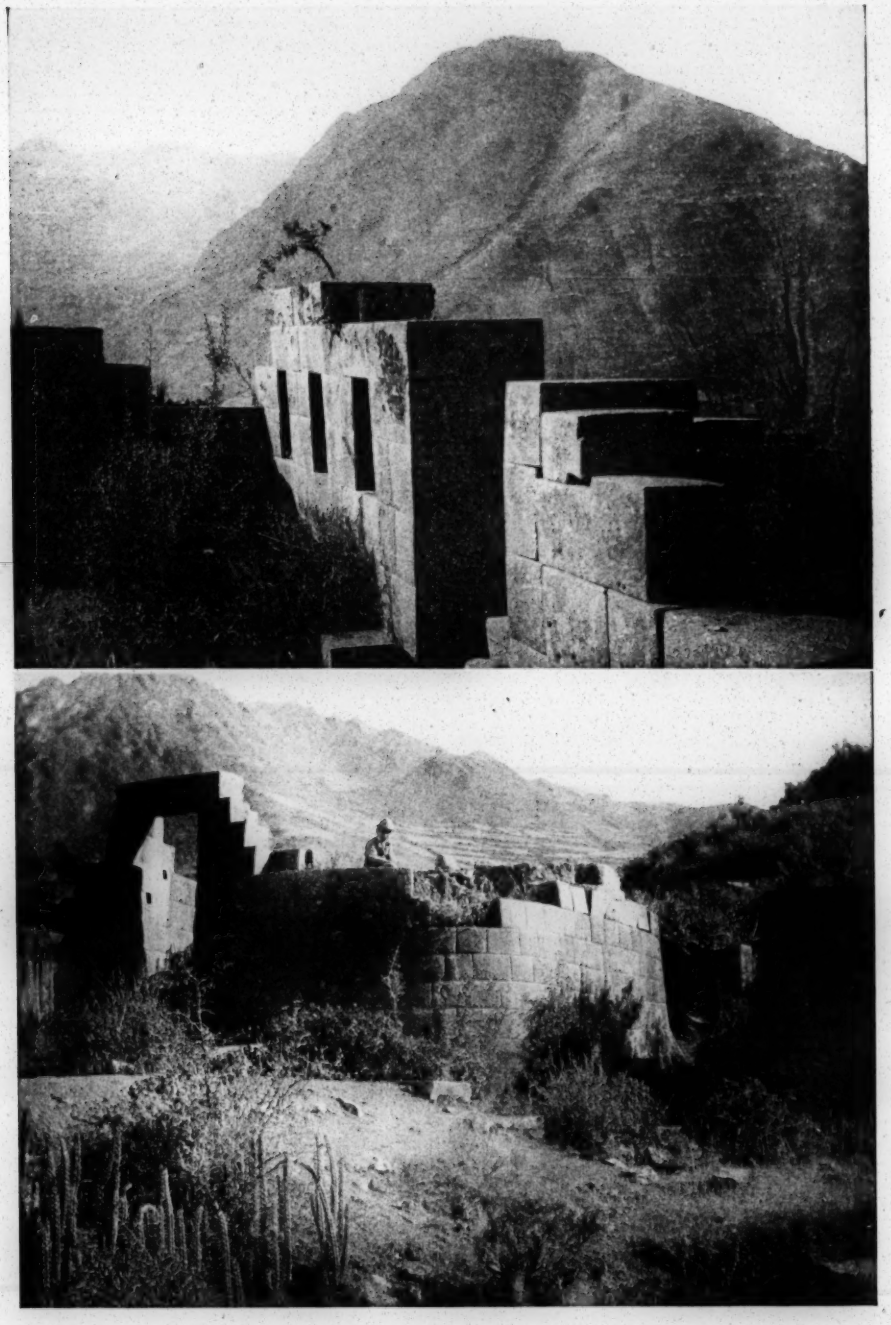
Ollantaytambo was erected on a spur of a mountain at the meeting place of the Yucay and Patacancha valleys. The outer walls of the fortress zigzag up the hillside, and on the summit are the remains of cyclopean walls, beautifully hewn doorways, niched corridors, and great slabs of porphyry supporting a terrace. There are six of these giant slabs in an upright position, and half way up the mountain side others weighing many tons, which fell by the wayside. These abandoned slabs are called "The Tired Stones."

With all other travelers who have seen the Inca fortifications, I have never ceased to marvel at these enormous rocks carried to great mountain heights from far-away quarries. I cannot content myself with the explanation given by a Yankee whom we met at a *posada* in Sicuani. Four of us, speaking English, brought up the old question, "How were the mighty stones carried great distances, to great heights?" and "Uncle Si" slapped his hand on his knee, hitched up his trousers, spat, and declared, "They done it with a yerb." Artificial stone mixed on the spot with a magic herb, I suppose he meant. Well, he was a wise old Yank! He was traveling around South America trying to sell a patent green paint to cover blackboards—a noble endeavor to save the eyesight of the little Latin Americans.

There is no posada in the village of Ollantaytambo. The Gobernador, chief magistrate, took us in, but he had no extra beds in his house, and we were obliged to sleep on the dining-room table. At the witching hour of three in the morning we were awakened by the

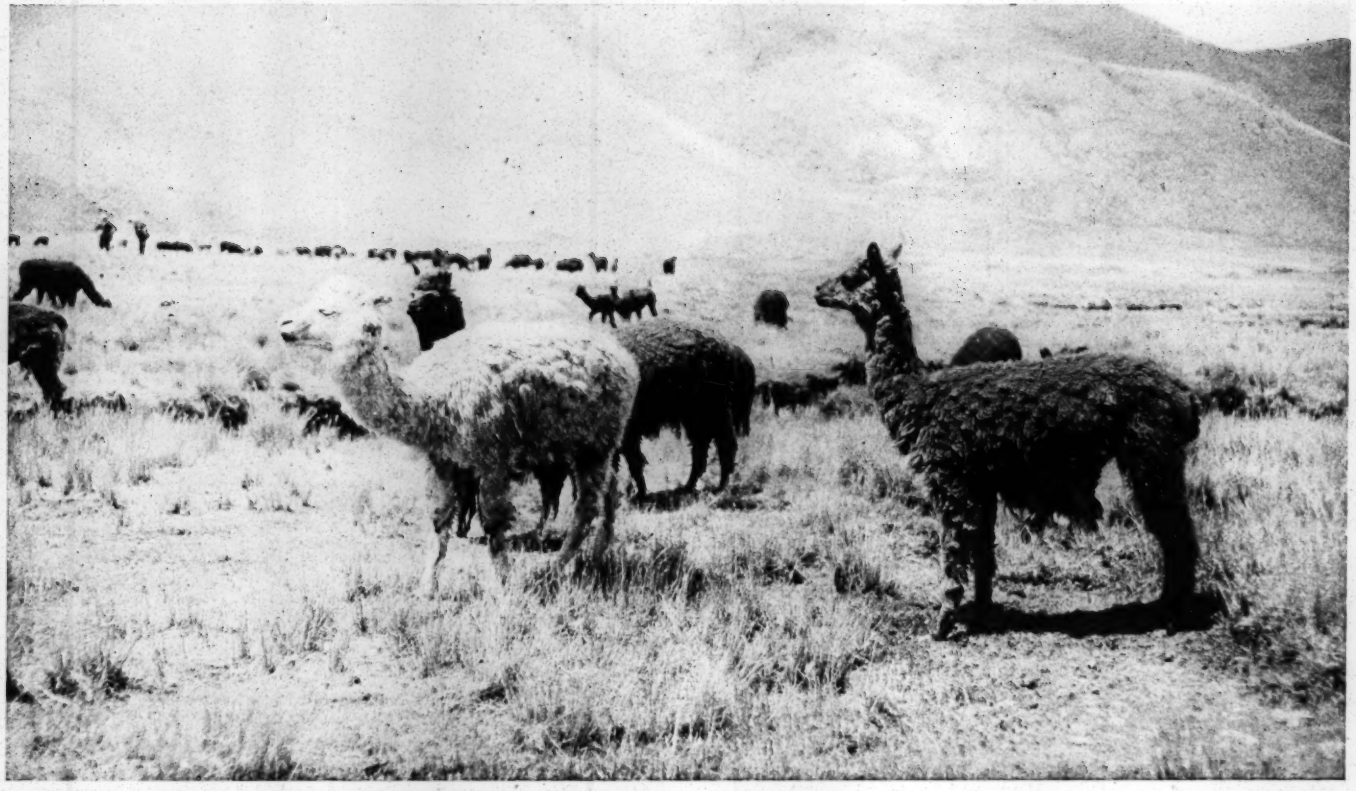


RUINS OF THE FORTRESS OF OLLANTAYTAMBO, IN THE VALLEY OF YUCAY (SEE PAGE 613)



RUINS OF THE FORTRESS OF PISAC. ASTRONOMICAL STONE, PISAC. IN THE VALLEY OF YUCAY (SEE PAGE 618)

TYPES SEEN IN THE VALLEY OF YUCAY, PERU



A FLOCK OF ALPACAS, SEEN IN THE VALLEY OF YUCAY

The Alpaca, unlike its cousin the Llama, is not a burden-bearer, being instead highly valued for its fine coat of woolly hair, the fiber of which is small but strong, very silky and lustrous. The unshorn coat reaches a length of about two feet, the annual shear, however, being only about eight inches.

crowing of roosters, and found that the pet fighting cocks of the family were tied to the table legs—the Peruvian alarm clock! In the early dawn we were on our way up the valley, and, passing Urubamba, rode on toward Pisac, the fortress which guards another mountain pass.

Before visiting Peru I had been impressed, in reading, with the monumental greatness of the Incas, but in the Upper Yucay Valley saw evidences of their agricultural and engineering skill as well. There are many terraces, aqueducts, well-planned fields, and the river has been straightened for miles from its serpentine course.

A number of the bridges spanning the river are of *mimbres*—woven branches fastened to cables with thongs of hide or vines. This makes a very picturesque bridge, but I have crossed rivers on safer ones. The mimbres, which we nicknamed "monkey bridges," are often lopsided and sway with the breeze. The question with us was whether to risk our lives in crossing the bridges or in fording the river.

Pisac is the most imposing of the fortresses. It is built on a mountain top, and looks down on the meeting of the Yucay and a lesser canyon which leads to the Paucartambo region, across the Andes. It is the most complete of the fortifications, has the most commanding situation, and contains a fairly well preserved temple built to hold the famous Inti-huatani, the astronomical stone. In the Quichua language, "Inti-huatana" means "where the sun's rays are gathered." Within the fortress are many agricultural terraces and aqueducts, an evidence that the garrison was not dependent on the valley below, but self-supporting in days of siege. Looking across the canyon we saw ancient tombs built high in the rocks, seeming accessible only to birds. In a quarry within the fort I found an instrument, a wedge of *chumpe*, the Peruvian bronze, left there by a Quichua workman many centuries ago. Comparatively few students or relic hunters visit Pisac, and we found a number of fine old *chica* jars in the village. From Pisac we crossed the Andes to the Paucartambo country, but "that's quite another story." Returning to the Yucay Valley some weeks later we reached Cuzco by a new trail.

Those were long days in the saddle, with little food and less water. We knew the river water to be impure, as the sewage of Cuzco flows into it, and the brooks are also contaminated as they pass through the villages. At night we slept on the ground, wrapped in our blankets, at times finding shelter in a ruined temple, as there are many lesser ruins throughout the Valley of Yucay. We met no travelers save the highland Indians, and picked up a few words of their tongue. I felt that we had left civilization far behind. Even the Spanish colonial days faded. We were in the old Peru.

To know a country and a people, one must leave the highway and live near to Nature. We traveled much in the saddle on this great elevated plateau—over a thousand miles on a single journey—and gradually my standpoint changed. I started as an outsider, having little real sympathy for the Quichuas and Aymarás, little understanding of the history and environment which has made them the sullen, lifeless folk they are. In time I grew, through study and observation, but more through sharing the life, half-Andean myself, and find, in looking back over years of travel in South America—years in which we visited every country—that my greatest heart interest lies in the highlands of Peru and Bolivia.

AS SEEN FROM A DUTCH WINDOW*

By James Howard Gore, Ph. D.

Professor of Mathematics, George Washington University

IN looking out upon the busy life of Holland, one does not look "through a glass darkly." If so, it is not because the window-glass is not clean. The fondness of the Dutch for window-washing is innate and of ancient origin. Guicciardini, who gave to the world in 1567 his graphic description of the low counties and their people, said the pleasure of walking along the streets of a Netherland town is marred by the danger one continually runs of being sprinkled by the pumps with which the servant girls wash the windows. But that was in the good old times of long ago. Now the servant girls do not wash the windows, at least not in the cities. Here the windows are attended to by a company—that is, one of many companies, for there are so many that they now add to their signs and business cards the date of organization.

When I first saw one of their carts loaded with ladders of various lengths and pushed by men dressed in white, I thought they were house-painters who had forgotten their brushes. But in a few days I saw one of these ladders deftly hoisted in front of my window, and before the thought of fire and rescue formed itself in my mind, a white-coated man was washing my window. He did it well and quickly. Quickly, of course, for the company received only two (Dutch) cents for that wash, and of that amount the workman has only a share. For this reason, and because of the lively competition, the carts of the "Glasenwascherij" companies flit rapidly from place to place. A householder subscribes for the services of these window-washers, securing a visit once a month or more frequently, if he desires, and pays two cents a window, large or small, first story or fifth.

In Holland, as well as in other parts of Europe, the method of subscribing for a service that is somewhat regular is quite common; and if you wish to provide for a contingency that may happen, but which you hope may not occur, you can protect yourself by insurance, be it the breaking of a window or an attack of whooping-cough.

My window is not only clean, but is provided with "spies," sometimes called "busy-bodies," as the outside mirrors are named. My battery of spies enables me to see at a glance what is transpiring up the street and down the street, as well as who is at the door, by merely sitting at the window.

The second house on the right is a public-school building, one part of which is the district police station, and now and then an image is caught in the mirror of some malefactor brought to judgment, attended by the usual crowd of curious idlers. It is a veritable judgment. The inspector at once has a preliminary hearing, a sort of grand-jury trial, and dismisses the prisoner, imposes the fine, or, if the charge be serious and well-founded, remands him for trial. Should the culprit be found guilty of some minor misdemeanor, a slight imprisonment is imposed. While great rigor is observed in seeing that the full time is spent in prison, the days of serving the sentence is optional, provided the offender is a man of property or can furnish adequate security.

One of the common offenses is the failure to observe the sign that is posted at the beginning of some of the streets: "It is forbidden to drive in here." In passing, it might be said that this forbidding notice does not signify, as some writers on Holland have asserted, that the leaning houses threatening to fall make the street dangerous. It simply means that the traffic is so great that

* By courtesy of the Holland-America Steamship Line.

vehicles cannot easily pass, and hence to avoid blockades all teams must go in the same direction.

It is unfortunate that people ignorant of the language of a country should undertake to enlighten others regarding the habits and customs of that country. The mythical cleanliness of the town of Broek owes its origin to the wrong translation of the simple sign on the bridge at the entrance to the town—"Stapfoets rijden." To those who know, it means "Walk your horse over the bridge." To the imaginative describer of this fabulous village it signified that here the streets are so clean that you cannot take your horse through the town, but must go around it. Broek is clean. So is every Dutch town.

Opposite my window is a letter-box, a two-storied one, the lower being for parcels, while the upper part is the receptacle for letters. It is just around the corner. All letter-boxes seem to be in nooks and corners, affording a convenient blind, behind which the servant girls read in safety the postal cards that were given them to mail. Postal cards are in great demand in Holland. A mistake in addressing one is not expensive, for an uncanceled postal card is redeemed for the value of the paper, while a spoiled envelope is hopelessly lost. There is nothing which so strikes terror to a Dutchman's heart as loss, and with the hope of gain he will venture much.

A HAPPY SOLUTION OF THE TRANSFER QUESTION

He—sometimes a she—will secure the permit and peddle postage stamps, calling at business houses at regular intervals to supply their demands for a commission of one-half of one per cent; he will stand at street corners and transfer stations and sell street-car tickets, receiving as his profits the difference between wholesale and retail prices. The car lines rather encourage this business. The hawkers frequently suggests the idea of riding, and travel has increased through their efforts. There was a custom in Amsterdam—possibly now in disuse since the electric company controls the transit system—of not giving transfers, but by paying an additional one-fourth fare the passenger would receive a coupon that would entitle him to a trip on any intersecting line or a return on the same line at any time during the day of issue. This was a happy solution of the transfer question.

The natural thrift of the Dutchman suggests many ways for making money. He is found in all of the recognized vocations and trades, every possible variety of trade and every imaginable differentiation thereof. It would be far easier to specify what he would not do for gain. The catalogue would be: Change his religion, cheat, and give up smoking. To stop smoking would be like giving up breathing. He smokes at all times and in all places—no, not quite all; never in church, though one writer at least has said so, and not in the marriage hall of the municipal building. Why should he not smoke? He enjoys it, and never interferes with any other person's enjoyment.

EVERY MALE SMOKES FROM INFANCY

I have been trying to find out at what age boys begin to smoke. It is one of the things that has attracted attention here since the genial Thackeray sketched the three small plump Dutch boys smoking their big cigars on the little Dutch steamer.

They all smoke cigars. The artists in the future, in depicting Dutch life, must omit the traditional pipe and substitute in its place the more prosaic cigar. But when do the boys begin? Nothing but death stops them. I have seen a father and his family of boys enjoy their smoke together, a youth in knickerbockers handling his cigar like a practical smoker, and boys on their way to the primary school doing full justice to a good-sized cigar.

But when do the boys begin? Perhaps it is with them as the lifting the dress is with the misses, it comes natural, and it is as difficult to point to the exact time for that as it is to specify when spring begins.

XUM

The streets of Holland are usually wet. When it is not raining, the street-cleaners are earning their wages, in part, by sprinkling them. Thus it is necessary for the ladies to lift their skirts in crossing, and as it is hard to tell just when the girl becomes a lady, the former gives herself the benefit of all doubt and begins in time.

The girl just in her teens clutches at her dress as soon as she feels the first rain drops or crosses a street, and the little tot, whose dress barely comes to her knees, tries to save her flounces. I have watched carefully, and so far I have not seen a girl old enough to leave the perambulator who was too small to imagine that her skirts might not be soiled by the wet. To pull the skirt aside, to give it a gentle lift, comes instinctively. So it is with the boy's smoking.

Between the letter-box and my window there passes a good part of Dutch life, and the little that is not in the procession is suggested by some counterpart.

Even history cannot be forgotten, for I look out upon streets whose names are taken from men who took part in the struggle for independence—a struggle that illumines the annals of northern Europe; a struggle that kept alive in adverse times the sacred fire of freedom. From this contest Spain was so weakened that the Armada was not invincible, and England escaped a defeat that would have given to the world's map a different set of boundary lines and would possibly have exterminated Protestantism.

THE NATIONAL CHARACTER REVEALED BY HISTORY

An uneqaul war like that waged by Holland against Philip of Spain would have resulted disastrously, had it not been for the national character of the people—a character that was in a large measure shaped by their geographic environment. Foreigners have invaded their land and swayed for a time its destinies, but their leaving was like the passing of a horrible nightmare—it left no influence upon life or habits.

When the Frisian vowed that his race should be free as long as the wind blows out of the clouds and the world stands, he thought of political freedom. But there is a destiny spelled out in the dikes and dunes that insures a grander freedom than immunity from serfdom—a freedom from the tainting taste for foreign foibles.

Since the land on which these people live is new, their history cannot be ancient, and with great definiteness it can be followed from the Batavia of Cæsar down to the Nederland of Wilhelmina.

We may begin with Charles the Great, who, mindful of his Brabant ancestry, left to the Batavians over whom he was called upon to rule their native customs and gave to them chiefs of their own nationality for rulers. This type of centralization was successful in the hands of a capable ruler, and the local chieftain vested with the title of deputy, count, or duke, answerable to the head of the state for his tribute money or his army, laid the foundations of Holland's greatness.

The dukes and the counts of the Netherlands were not slow in realizing that their wealth grew with the increased prosperity of their subjects, and encouraged them to gather into villages, and there, combining forces and capital, brought into existence manufactures of such excellence that the lowlands supplied the people of the neighboring countries with the products of mill and loom. These communities became little republics. They were made up of guilds recognized and protected by the authorities, since they contributed to the prosperity coveted by these authorities. In the course of time the guilds deputed delegates to meet in council, and their deliberations were passed on through representatives who, in assemblies, assisted in the general government. Thus the Netherlands became gradually familiar with government by representation.

These cities were not unfrequently quarrelsome and combative. Their horizons were bounded by the walls of their own towns, and the narrowing processes of such a pent-up existence brought about a certain intolerance toward one

another, but did not interfere with their united stand against a common foe.

Philip the Good obtained by inheritance the two provinces of Flanders and Artois; he purchased Namur; he usurped the Duchy of Brabant, and he dispossessed his cousin Jacqueline of Holland, Zealand, Hainault, and Friesland. His dominion extended from the foot of the Alps to the German Ocean, and comprised what was then the wealthiest part of northern Europe. The Netherlands at this time had reached the heights of its prosperity and the full enjoyment of its chartered liberties. The sovereign had his authority. The nobles had their place in the council; but the municipal authorities, though checked by these two forces, had a substantial influence over both.

In the assemblies of the estates the authority of the prince was, in his absence, represented by the *stadthouder*. When the Netherlands were united under one sovereign, the *stadthouder* became a permanent institution as well as a convenient substitute. When grants of money were asked, the nobles voted on the request. The cities, if they had received instructions to do so, bargained as to the grant; if not, they adjourned to consult their constituency. The ingrained habit of municipal isolation explains why the general liberties of the Netherlands were imperiled, why the larger part of the country was ultimately ruined, and why the war of independence was conducted with so much risk and difficulty, even in the face of the most serious perils.

We sympathize with William the Silent when he waited in feverish anxiety for the vote of funds sufficient to pay his needy soldiers, and applaud his patriotism when he sold his family silver to meet urgent demands. We are tempted to condemn as narrow and inefficient such insistence upon the prerogatives of local authorities. But when we see the beneficial results that come from our system of township, county, and state government, each independent of all others of its class and subservient to the type immediately higher, we give thanks that the system passed through the fires of the Dutch revolution and sustained the shock of civil strife.

SUCCESSFUL ROVERS OF THE DEEP

In another respect we see in the political fate of the Netherlands the effect of local conditions. Owing to the absence of nearly all kinds of winter food for animals, it was difficult to keep stock in good condition for slaughtering; thus the consumption of salted fish was enormous. The fisheries of the German Ocean became a mine of wealth and served as the nursery of the Dutch navy, of those amphibious mariners who struck the first blow for Dutch independence and became the ancestors of that succession of brave sea captains who crushed the maritime supremacy of Spain, founded the Batavian empire of Holland in the tropics, engaged in an unequal struggle with England, and sustained for a century the reputation of Holland after its real commercial greatness had declined.

Because of the clever skippers ever available and the demand for greater opportunities in which Dutch energy might display itself, voyages of discovery became popular, and for many years the Dutch flag claimed the farthest north and flew to the breezes in the south and distant east. Spitzbergen and Barentz Sea were of Dutch discovery, Van Dieman's Land originally belonged to Holland, and the Dutch East India Company for many years monopolized the Oriental trade.

Coming down to the present day, many of those who go down to the sea in ships are comforted to know, when the winds roar and the waves run high, that their vessel's crew are Dutch, and that there is in command the skillful, cautious Van der See, Bonjer, Potjer, or Roggeveen. "This is a hurricane," you may say. "A bit of a blow," is the reassuring reply of the captain. The ship will turn turtle, you think; "A slight roll," says he. Attentive to his duties, he has no time to be loquacious. He

Photo and Copyright by Underwood & Underwood, New York

QUAINT COSTUMES OF VILLAGE GIRLS ON THE WHARF BESIDE THE FISHING BOATS, **ZUYDER ZEE**

claims no credit for smooth seas, nor declares any weather the worst. He is true to his trust and, knowing that he sails a N. A. S. M. ship, he is confident of a safe voyage.

The descendants of some of the old-time mariners to the icy North or to India's coral strand may now be poling a boat along the canal that crosses my street. Their ships are less ambitious, their journeys are not so romantic, and their cargoes may have less of value; but they are adding, each in his own way, to Holland's greatness. This greatness may be called dwarfed in its proportions, but Holland is truly great in her industry, perseverance, and in the spirit of her people. It is this spirit that dares to contest with the sea for supremacy as it dared the haughty Spaniard. It rests in the heart that never falters and lightens burdens that to others would be crushing.

THE WONDERFUL CANALS

This canal at my corner, whose busy traffic is reflected in my friendly mirror, is one of the many which divide Amsterdam into hundreds of trapezoids and furnish cheap and commodious avenues for the transport of every conceivable article of commerce gathered from all parts of Holland. It would be extremely interesting to know the cargoes and starting places of the vessels which are pushed along these canals—literally pushed—for tug service is expensive and the restricted possibilities for tacking renders the sail useless. In pushing, the boatman walks to the prow of the boat, thrusts a long pole in the water, then facing the stern, and with his shoulder against the free end of the pole, he literally kicks the boat from under himself as he apparently walks toward the stern. When he risks walking overboard he withdraws the pole and repeats the process, going from side to side for purposes of steering in case only one is poling.

It is a slow and tedious method of propulsion. Surely the saying, "It's a good thing, push it along," must have originated in Holland. Here nearly everything is pushed, and the number of push-carts is far in excess of the number of vehicles for horses. The delivery carts are pushed; small peripatetic shops seem impelled by a magic power, but there is a man behind or a woman; vegetables enough to stock a market are bowled along from street to street; and then the fish—smoked and pickled, fresh or dried, all sorts, sizes, and conditions, alive or dead. The purchaser makes her selection, and the vendor proceeds to prepare the fish for the pan. To the credit of Holland it must be said that a man is not allowed to use dogs to aid in the work of propulsion through the streets.

It is also astonishing to note the variety of goods which are offered for sale from these carts: hardware and tinware, even including small stoves; books, day-books, and ledgers; pens, ink, and paper; glassware, lamp chimneys, cups and saucers; shoes, hats, clothes, old and new, and in fact the only things omitted are medicines and coffins. The dealers in rags, bones, and old iron pick up every imaginable bit of rubbish, and after deciphering its use and burnishing it up a little, offer it for sale on the market square or trade with some brother peddler. I watched from my window two sons of Israel inspecting each other's load. It was a painstaking process. I could not hear what was said, but I could see that one fondly handled a few yards of discarded dress trimming. An offer was evidently made and refused; then perhaps others—a diminution possibly of a cent on the part of the one and a corresponding increase by the other. But to no avail. They separated. However, the longing to buy or the desire to own finally got the better of one, so he stopped and raised his offer, which was accepted and the important deal made. I could see the amount paid; it was twelve cents; but then one cannot estimate the pleasure which the dealing gave.

THE LONE FISHERMAN

But to return to the canal, though if a canal is wanted it is not necessary to turn; one can go straight ahead. But to

return to the subject. Testy Voltaire on leaving Holland said: "Adieu canaux, canards, canaille." He could not have said it before leaving, for there are canals everywhere—canals large enough to float an ocean steamer and canals so small that they barely admit the boat in which the milkmaid, usually a man, goes out to milk. But I have never seen a canal too large or too small for the fisherman's line. Along the bank of every one, small boys and large boys may be seen waiting for a bite or "a glorious nibble." I have watched hundreds of persons thus engaged and I have seen as many fish in duly authenticated baskets, but I have never seen a fish in its proper juxtaposition with respect to the fisherman. I have set on the bank beside the patient waiter, and as the cork trembled just a little he would say, with a wise look, "That's a cat" or "That's a flat." He did not know, but his surmise was as pleasurable as knowing, and as he lifted the baitless hook from the water his face wore the look of "I told you so." Surely the lone fisherman was a Dutchman.

First and foremost, the canals are drains, except in rare instances; the traffic-carrying is incidental. In the country, since most of the land is below the level of the sea, the soil must be drained before it can be cultivated. Ditches are dug, into which the water runs; then, as these ditches become full, the water is pumped into others having higher banks; then from the latter into others still higher, until finally sea-level is reached, and the outflowing tide carries the water oceanward. The ordinary laws of nature are reversed. Here the drainage is from a lower to a higher level. In the early steps the water is lifted by wind power, but soon the volume becomes so great and such a large area of land is interested in its prompt handling that the state erects a pumping station and a trusted official sees to it that the water in his canal does not remain above its assigned level.

CITIES BUILT ON PILES

Thus it is that these drains become waterways. Their banks, made of sandy earth, require reinforcement; they must be faced with stone or fortified by piles large or small. In the case of the larger streams, these banks become dikes, and both stone and piles are needed in order to keep the water within the bounds. There is not a stone quarry in Holland, yet it has more stonework to the square mile than any other country in the world. Its forests are not sufficient to furnish the inhabitants with fuel; still it has millions of great tree trunks wholly underground, driven in to serve as building foundations or hold in check the washing waters. The great dikes along the North Sea, on both sides of the River Maas, skirting the Rhine and the Zuyder Zee, are faced with piles as close together as they can be driven, each one of which cost four dollars to put in place. They are backed up by dressed German basalt or Norwegian granite. If Napoleon claimed Holland because it was formed of detritus carried down by the Meuse and the Rhine, Norway and Germany might demand a reward for holding it.

It is always fascinating to watch a pile-driver; to see it swing a great log erect and into place, and then with stroke after stroke drive it home. I inspected the building operations; saw the men, provided with high-top boots, clearing away the foundations. A steam pump was industriously striving to keep the water out and the pile-driver was thumping away. One morning the entire foundation was full of water, and a second pump was called into action. At last rows of piles were in place, rows like the teeth of a comb; but the pump could not stop. The tops of the piles were cut off at the same height; tenons cut on them and great horizontal beams mortised to them. The space between these beams is filled with sand and the whole is covered with heavy flooring, but the pump kept up its monotonous throbbing. On this floor the brick walls are erected, and soon there stood a great six-story building on wooden feet. When will the pumping cease? Never. Under the building there is a catch-basin, and whenever it becomes full it must be emp-

Photo and Copyright by Underwood & Underwood, New York

NEIGHBORS, BIG AND LITTLE, IN A TIDY STREET OF A DUTCH TOWN

tied; and this I suspect will be very often, for the canal at its side is six feet higher than the basement floor. No wonder that Diderot was surprised that the Dutchmen ever dared to go to sleep.

In Holland an architect must be a hydraulician as well, and every contract has a safety clause allowing extra payment for each pile in excess of the stipulated number. Practically all of the houses of Amsterdam rest on piles. This gave rise to the remark of Erasmus: "I know a city in which the people live like rooks, in the tops of trees."

THE DUTCH HOUSE

Of course these piles never reach solid ground, and at any time they may conclude to go deeper, either individually or in concert. This causes the houses in time to lean, and unfortunately they do not all take the same direction. There seems to be a sort of architectural jamboree, and in looking down one of the old streets one is startled at the angles which the house fronts make with the vertical. Some lean forward, as if impatient to start in a race across the city; others rear backward, like an unwilling criminal dragged to justice; some lean together like conspirators, while others show an inclination to separate, as though they were school-girls fresh from a quarrel. A stranger's first impulse is to to exclaim, "Surely these houses will some day fall." The Hollander will promptly answer, "But they never do."

The heavy material—tile—used for covering the houses makes it necessary to have steep roofs; hence, in order not to waste valuable space in high attics, the roofs all extend in the direction of the length of the house, placing a gable on the front and on the rear. Projecting from the comb of practically every front gable there is a covered beam carrying a heavy hook on which a pulley can be hung. This is of great value in moving, for a rope can be passed over this pulley and the heavy furniture hoisted or lowered at will. In the strict sense of the word, flats are not common, but in the larger cities the majority of the houses are four-storied and accommodate two families, one occupying the two lower floors and the other the two upper floors. Thus all of these houses have two front doors, one opening directly into a hallway attached to the lower apartment, while the other is at the bottom of a stairway whose upper end is the hall of the apartment two stories up. The upper house is called *bovenhuis*, from *boven*, above. It is not a cow-stable, as some have thought, from *bos, bovis*, etc., the Latin for cow. In classic Leyden, Latin signs are quite common. There a room offered for the occupancy of a student is never indicated by the ordinary sign "*Kammer te huur*," "Room for rent," but in its stead the Latin equivalent, "*Cubicula locanda*."

The long stairway referred to makes moving a difficult task if every piece of furniture is carried up; but by having a wide window in the center of the front on each story, the heavier pieces can be hoisted as mentioned. This obviates the necessity for having wide, easy stairs; and, since they would require so much space, narrow stairs are the rule. As in many of the European countries, there is a tax on windows, not that there is any objection to windows, but because they are taken as an exponent of the magnitude, hence value, of the house. The use of the wide window as an exit for furniture diminishes the necessity for more than one window, and the annual payment of tax to the city is correspondingly diminished. In this case necessity serves as a virtue.

THE DUTCH HOUSEMAID

Frequently the doubling up of families in a single house is a great convenience. Every morning all of the loose rugs in a house must be shaken. For this service two strong girls are needed; hence if a family keeps only one servant, it arranges with its cofamily for coöperative shaking. The intimacy between the two families may be very

slight, but they will always be ready to unite against dirt, their common foe.

This carpet-shaking is done on the sidewalk, and the work furnishes quite a pleasing sight. In fact, nearly every outdoor occupation in which the Dutch girls engage presents an agreeable spectacle. These prim maids are dressed in striped gingham and wear a dainty cap. They look as though they were members of a great army whose uniform is fixed and invariable. It is true that there is an option as to the kind of stripes selected, and the shape of the cap may differ; so does the uniform of the various branches of an army.

In Holland we notice a fondness for uniform. The postman is uniformed, of course; then, too, the policeman; also the fireman, who always carries a rope for emergencies. The shop porters have a distinctive dress, and so has the runner for the bank; but to the tourist the strangest of all is the funeral attendant. These black-dressed and silver-corded men, wearing cocked hats and sometimes knee breeches, walk beside the hearse, follow it, and accompany each carriage as footmen. After burial, these men distribute notices of the demise to such acquaintances of the deceased as may live in the city.

Near the other end of the vista of life is marriage, and the passing of carriages in small processions, each having at its head one containing a lady wearing a white veil, and a young man conscious of the event, and driven by a coachman with the usual white boutonniére, and drawn by horses whose bridles were decked with white ribbon, suggest a wedding ceremony. In the larger cities parties thus led are observed to be more frequent on one day of the week than on others, and a single query will reveal the fact that there is one day on which second and third class marriage ceremonies are performed.

It is a sensible provision to arrange as many events as possible by classes. It fixes a sort of limit in the important matter of expenditure and discourages a man with a street-car salary from trying to live up to an automobile standard.

MARRIAGE CEREMONIES

In the case of weddings, the class does not determine the grade of husband or wife produced. It is solely a question as to the amount of the fee required, and the fee is fixed by the amount of time given to the ceremony—that is, in the second class the ceremony is individual, while in the third a score or more are married at once.

I assisted—literally assisted—at ceremonies of these two classes. The members of the city council take their turns at these functions. On the day appointed, the brides, grooms, and their friends assemble in a large room in the city hall. The officer takes his place upon the platform, and a clerk at a table picks up the papers previously executed and calls out the names of the groom and the bride. They stand up to acknowledge their identity; then their witnesses are called upon to rise. All the parties are thus, one after another, identified. Then the officer arises and, asking the brides and the grooms to stand up, he proceeds to discourse upon the duties of the wife, the privileges of the husband, and the sacredness of matrimony, closing with the question, "Will you give your consent to the union about to be entered upon, abide by the laws, and live solely for one another?" To this there is in chorus the answer, "Yes." Whereupon he strikes the table with a gavel, saying, "I pronounce you man and wife."

The symbolism of the gavel, so important in Europe on all formal occasions, doubtless in this case points to the forging of chains that bind a contract. This is further strengthened by the retention in legal terminology of the Latin word for chain in certain judicial decrees affecting married couples.

The second-class ceremonies are taken up individually. Each party is ushered into a room set aside for the purpose, one after another, and the ritual repeated for each. On the single day referred to, fifty-seven couples were united.

After the civil ceremony some go to church to pass through the religious rit-

ual, but all go forth to dinner. This is given by the bride's parents, by friends of the contracting parties, or at a restaurant, where each guest adjusts his score.

It is a merry, happy day. No drunken carousing, no boisterous chiavari. There is but little senseless romance in the courtship; no thriftless waste in trousseaus that poorly fit the daily life; but, realizing that partnership has been entered upon, the battle of life is taken up in the consciousness that each is a contributing member of the firm and is in part the custodian of the other's happiness.

No one must think that the Dutchman's stolidity congeals the springs of love or that his practical nature cannot harbor sentiment. At frequent intervals during the past twelve years I have found a resting place in front of the mirrors, reflecting the busy life of Amsterdam. It was more than a place of rest; it was a home, and each coming was made welcome by the recollection that a decade ago I made a photograph of the dear old face and form that soon after left vacant the arm-chair opposite which Mevrouw now sits in sad loneliness.

THE MUNICIPAL PLAYGROUNDS

Over the bridge at our corner is a playground which belongs to the city and is maintained by it for the use of the children. Even during vacation, the teachers of the various schools take their children in turn to one of these grounds, where they can enjoy the many games there provided or try their skill with the different pieces of gymnastic apparatus.

In Amsterdam the playing of the school children is looked upon with reverence, and even the busy money-makers on 'Change turn over the historic Exchange Building to the unrestricted use of the children during the afternoons of the third week in August. This is done to commemorate the saving of the city on one occasion, when the children at play discovered the approaching Spaniards and gave the alarm.

These municipal playgrounds seem to serve as a convenient place in which the children can work off their superfluous energy. Play is natural to childhood, and its interdiction at this period is but postponing the outbreak of pent-up energies. Again, this combination of play with gymnastics puts at a discount the senseless toys that amuse but do not entertain with profit to the mind or body.

The school-houses, being municipal buildings, are put to various uses. They are utilized as polling places. Elections are not wholly devoid of excitement, though the torchlight processions are not deemed of value in imparting the principles of civic government. Before the date set for election, there is sent to every voter a ballot bearing the names of all the candidates in his district. He eliminates at his leisure the names of the persons for whom he does not wish to vote, and on the day appointed visits the polls. After identification and the assurance that all of the prerequisites have been complied with, he deposits his ballot. In preparing this ballot at home, he is uninfluenced by the pressure of the candidates, and is also free from the excitement that might mar his judgment.

It is a wise provision that designates certain city officers as "wethouders," holders of the law or constitution. The very name emphasizes the importance of their trust and suggests that any dereliction means a failure to carry a burden as well as a betrayal of a trust.

To observe the law is natural to a Dutchman, though he protests against nature in his daily war with the sea. His existence in many instances has demanded obedience to a call to strengthen a dike or make it higher, to prevent the water from following the law of gravity impelling it to seek its level. He joins his force to that of others to prevent disastrous overflows and day by day gives an affirmative answer to the question, "Am I my brother's keeper?" While law-abiding, he sees to it that no laws are enacted that are impractical to enforce, and, above all, that his rights as an individual are not encroached upon. In no land is so high an estimate placed

upon personal liberty as in Holland. This may explain the anomalous condition that exists in the educational system. Free schools had their beginning in the Netherlands, and yet compulsory education has never found favor there, because its enforcement would mean the placing over the delinquent child an authority superior to that of the parent.

BEGGARS ARE NEVER SEEN IN HOLLAND

The children bereft of parents are well taken care of in this land. Orphan asylums are abundant and their conduct is beyond reproach. When we see passing by the boy with the two-colored suit—half red and half black, with the dividing line apparently cutting him in twain—we are apt to think it cruel to place upon the unfortunate such a conspicuous badge proclaiming his dependence; but it is a feature of economic administration. When the boys are sent out on errands or allowed a vacation, they are sure to return, for by their unmistakable uniform they are known, and it is a punishable offense to harbor an inmate of an asylum or aid in his escape.

Homes for the aged are seen in every city, and even the insistent demands of commerce in the Kalver stratt of Amsterdam cannot drive out the home in the Luisen Gasse.

There are no doubt beggars in the Holland cities, but they are never seen. The only semblance to one I ever saw was an old man who stood all day long by the door of a dentist. He had evidently learned how relieved one feels upon leaving the chair of torture, and so he stood there to receive the coins dropped into his hand as a sort of thank-offering.

When the Dutch made of their country an ark of refuge for all whom other lands oppressed, the Jews came in numbers, and, finding here opportunities for their skill in trade and commerce, they remained and added greatly to the prosperity of the home of their adoption. They not only contributed to the nation's wealth, but they contributed more nobly by precept and example to the great work of caring for the poor. On this subject alone a book could be written. So deeply is the question of local administration of charitable funds and the alleviation of neighborhood necessities woven into the sympathies of the people, that they preferred rather to see a ministry fall than yield to the governmental demand for governmental direction of charities.

THE PAWNBROKING SHOPS ARE ADMINISTERED BY THE MUNICIPALITIES

Where else can one find an organization similar to the Society of General Welfare? This society, with a membership taken from all classes, has for its purpose the general advancement of prosperity, and seeks to promote the intellectual, moral, and social condition of the people by fostering education, by ennobling their concept of life, by increasing the earning capacity of the wage-earner, and by enabling him to better enjoy the fruits of his labor. In the hundred and twenty years of its existence it has spread abroad good, popular, and cheap books, improved the schools, rewarded deeds of valor, instituted popular lectures, and finally became such a recognized instrument for good that the government on more than one occasion sought the aid and advice of the society, and its usefulness so appeals to the people at large that one person out of four hundred of the entire population is a member. It is safe to say that in all the world there is no charitable organization that enjoys such a widespread membership.

Does any other country maintain by private subscription colonies in which poor families are placed and aided to support themselves by cultivating a plot of ground given them at a small rental? Can any nation boast of pawn-broking establishments created by law and administered by the municipalities? And we would seek in vain for larger per capita deposits in the postal savings bank than we find in Holland. We can do well to repeat the words of Louis XIV: "Have no fear for Amsterdam. I firmly

Photo and Copyright by Underwood & Underwood, New York

PICTURESQUE AND THRIFTY DUTCH COUNTRYWOMEN WITH MILK PAILS BALANCED ON WOODEN YOKES

believe Providence will save her because of her benevolence to the poor."

The perambulator passing by suggests the joy its occupant brought to the home of which it is now a part. Its appearance was regarded by all relatives and friends as a very happy event. In some parts of Holland the dwelling which a little stranger has thus mysteriously entered possesses, by an old law, peculiar privileges and immunities. No outward disturbance is permitted to trouble for a fortnight the residence to which a son or daughter has been added. It is secure from legal executions, from duns and bailiffs; and soldiers, even in time of war, cannot be quartered on the premises.

THE DUTCH ARE THE SECOND LARGEST HOLDER OF AMERICAN SECURITIES

Across the canal that passes my corner is a building into and out of which men are constantly passing. It is an unpretentious house, quite like its residential neighbors. It is only upon coming near that the brass door-plate can tell you that here a banking business is conducted.

If you will enter, you will see but little to suggest business activity and nothing that is sumptuous in the way of furnishing. In the high board partition are many windows with closed shutters having above a sign stating its functions. After selecting the one that promises the service you require, you approach, the shutters open, and in whatever language you find most convenient state your errand. In a time that seems long to one accustomed to the rush of American cities, the business is dispatched, and you leave, wondering how this can be the great institution that takes such a large share in the world's transactions. Express your wonder to your consul, and he will tell you how one of its officers just left with an invoice covering a shipment of a million dollars' worth of bonds to the United States, and how he would not be surprised if a similar visit should be made every day of the week. He could tell you that the Dutch are the second largest holders of American securities, and that governments seldom make loans until the Amsterdam bankers are consulted regarding the terms proposed.

The Bank of Amsterdam was founded in 1609, for the purpose of issuing guaranteed certificates, which are known in our day as bank notes. Against these notes coin was held, at one time reaching the enormous sum of $180,000,000. The business world was so confident of the solvency of the bank that these certificates were universally at a premium. The bank was under the management of the Amsterdam corporation, the chiefs of which examined the treasure annually and made oath that it was of the amount stated by the managers. It should be mentioned that this institution antedated the Bank of England by nearly a century.

GAUGING THE WATER LEVEL

From my window I can see in the canal, against its walled face, a board projecting above the water. With its black horizontal lines and figures it looks like a giant thermometer without the tube of mercury. At the top are the letters A. P., and the numbers have minus signs. If one watches the water level, one will observe that day by day there is a slight fluctuation in the point reached by the water's surface. A single question would elicit the information that this is a gauge, that the letters A. P. signify the bench-mark of Amsterdam, or the zero to which all water levels are referred, and that the minus sign indicates that the water thus recorded is *below* this zero. When you first learn that the water upon which you are looking is below the level of the sea you shudder; when you are told that a large part of Holland is lower than the ocean that beats against its shores you tremble. There are many such gauges placed in the canals of Holland, and, being connected by precise levels, the markings on all are exact in reference to the Amsterdam zero.

Since a large number of smaller canals are emptied by wind pumps into each larger and higher one, the pumping at each transfer station cannot be unlimited, for then water might be put into a canal more rapidly than it could be pumped out. Then, too, the final canals emptying into the sea have their discharge limited by the height of the tide at their mouths. Thus it is necessary that at each station the height of water should have a fixed and defined limit. Then the man in charge of each station is told that he must not pump after the water in the receiving canal has reached a certain height, and that the water in the lower canal should be kept below a certain level—that is, if it rises above that height there is danger of an overflow. From this it can be seen that a local engineer might be embarrassed by conflicting orders. He may be forbidden to pour water into one canal because it is ready to overflow, and know at the same time that the lower canal is dangerously full. Fortunately for him, he is not called upon to worry about this. The latter condition had already been observed by the district inspector, and notices served that pumping into this lower canal should cease at once. The canals still lower might thereby be in danger of overflow, but that would cause

the pumps still lower down to stop until the individual farmers would be forced to throw their wind pumps out of gear. This might cause some fields to become submerged, but the principle is observed that it is better for the water to rise gently over a few fields than to have a large canal burst its banks, and the rushing waters endanger life as well as property.

This entire question of drainage, the conduct of river waters to the sea, and the protection of exposed shores are under the direction of the Ministry of Water Affairs. So important is this department that it might be called the Ministry of Interior Defense and Internal Expansion.

As you ride along in the cars you sometimes see windmills so small that you are inclined to think they are toys. Not so. They are sentinels. With vane outstretched it is always in the wind, and is ready to respond just as soon as it is thrown into gear. This is accomplished by a wooden float on the surface of the water immediately under it. The rising water lifts the float, and when it reaches a height which threatens to submerge the surrounding fields the machine is thrown into gear, and the revolving wings warn the farmer to start his pump and keep it going until his truthful ally coming to rest tells him that the danger is past.

DRIVING OUT THE SEA

Just outside of Amsterdam there was, years ago, an inland sea over which vessels sailed, and on which at one time a fleet of seventy vessels gave battle. In November, 1836, a violent west wind drove the waters of the lake into the very streets of Amsterdam. They swept over fields, and covered the opposing dikes, and even bridges. On Christmas day a fierce east wind arose and hurled the waters of the lake back again, and did not rest until a part of Leyden was inundated. An entire year was consumed in freeing the submerged land, and great losses resulted from the overflow. This was the final provocation. The challenge was accepted, and the battle was to be to the death.

An encircling dike was constructed, with a large canal on its outer face. Into this great pumps, lifting a thousand cubic feet at each stroke, poured the water of the lake into the encircling canal. After thirty-nine months the commission charged with this work made the laconic report, "The lake is dry," and the medal they issued in commemoration of the event contained in Latin the inscription: "Haarlem Lake, after having for centuries assailed the surrounding fields, to enlarge itself by their destruction, conquered at last by the force of machinery, has returned to Holland its 44,280 acres of invaded land."

These acres are now occupied by about twelve thousand people, and their products are the choicest of the land. In this vast plain, so recently the foraging ground of crabs, lobsters, and eels, straight roads are bordered with feathery-topped trees such as Hobbema painted; substantial and even elegant farm-houses are seen on every hand; throughout the commune there are police, cemeteries, fire companies—all the appliances of Dutch civilization—as well organized as in any of the older districts.

The commission is quite pardonable when, after recounting the material benefit resulting to the state, it says: "But this is not all; we have driven forever from the bosom of our country a most dangerous enemy; we have at the same time augmented the means for defending our capital in time of war. We have conquered a province in combat without tears and without blood, where science and genius took the place of generals, and where workmen were the worthy soldiers."

There are still within the borders of Holland thousands of acres of first-rate mud aching to contribute toward the making of Dutch cheese for the foreign markets, but their existence is smothered out by the same thousands of acres of overlying brackish water. There are also many Dutch fingers itching to feel

the guilders that would come in exchange for the cheeses thus produced. In time the government will set about to relieve the aching and the itching, and the Zuyder Zee, passing into history like the Haarlem Lake, will place seven hundred square miles at the disposal of the Dutch farmers. The soil thus rescued will, for a time, give out a leaden cloud of fever and ague which no steam pump yet invented can lift away, but which will be worked off by Dutch patience and quinine.

EVERYBODY IN HOLLAND LOVES FLOWERS

In the world of horticulture Haarlem and tulips are synonymous. It is here that the air is filled with a delicious perfume and the eye charmed by the sight of acres of hyacinths or tulips, which are planted so closely that they seem huge carpets, with the brightest colors in their designs, laid down by mother earth for her own housekeeping. Here are seen tulips uncolored, fine, and superfine; monsters, hybrids, and thieves classified into a thousand orders of nobility and elegance; tinted with all the shades of color conceivable; spotted, striped, and speckled with leaves fringed, waved, and festooned; decorated with medals of silver and gold; distinguished by the names of artists, generals, and statesmen; characterized by bold and loving adjectives recalling crossings, adventures, and triumphs—all leaving a sweet confusion in the mind of beautiful images and pleasant thoughts.

Everybody in Holland loves flowers. The winter is long and bleak, so when spring comes nature breaks forth in beauteous rejoicing, and man looks with gladness upon the evidence that summer is near.

Upon the banks of our canal there is every Thursday a flower market, and as I look out I see a man admiring with wistful gaze the potted plants and flowers before him. The grimy iron wheel under his arm tells that he is a diamond-cutter. The wheel he carries is the revolving disk against which he presses the little gem that mocks him with its brightness and defies him with the impossibility of its possession. For him the seasons pass without change or chance, the days come and go, the hours follow in an unbroken repetition of wistful work, and life, creeping darkly on, knows no rest until its end has come.

To one who makes a rapid run through Holland there comes a feeling of disappointment. He sees less of the amphibious element than he had expected; the people move too slowly to justify the claims made for their attainments, and there is a dearth of the quaint costumes of which he had heard so much. But for the person with eyes open to the beauties of art, mind keen to grasp the effects of environment upon character, and heart responsive to efforts put forth for the amelioration of sorrow and suffering, no land under the sun possesses so much of interest or gives so much to the tarrying tourist.

Toward Holland my face turns in gladness, and the fleetest agencies of transportation, in taking me thither, would move too slowly were it not that, on stepping aboard one of the ships of N. A. S. M., the captain's greeting calls to mind the fact that I am under the flag of Holland.

In leaving, my eyes look with a sentiment of respect and tenderness upon the flower-decked windows, the silver helmets, the livid sea, the downs, and the windmills that bristle over the landscape and swing their arms as if in adieu.

There is a feeling of depression as the gables, masts, and steeples fall behind. The gathering haze of distance softens the outlines of things material, and there come the visions of Rembrandt, Erasmus, Boerhave, Grotius, Barentz, William of Orange, gracious Wilhelmina, and all the beautiful and noble images of that glorious, modest, and austere country.

But, like the days of sojourn, these visions, too, pass away, but memory brings cheer in the echo of the reassuring words expressed on parting,

"TOT WEERSIENS."

XUM

PEASANT LIFE IN THE BLACK FOREST

By Karl Frederick Geiser

With photographs by the author

THE Black Forest region, which has given the world so many beautiful legends, weird superstitions, curious stories, and folk-tales, covers an area of nearly nineteen hundred square miles. The Rhine forms its natural boundaries on the south and west; its eastern mountain ranges are bordered by the plains of the Neckar and the Nagold, while its northern limit is marked by Baden-Baden.

A convenient entrance into the heart of the northern district of the Black Forest may be made from Freudenstadt, a city of some ten thousand inhabitants, situated high on one of the outer mountain ridges which forms the northeastern boundary. From here an incline railway descends toward the northwest into one of the most beautiful valleys of the entire region.

Removed from the beaten path of the summer tourist, unspoiled by frequent contact with Americans prone to heavy "tipping," here is a country where life may be observed in its rustic simplicity, a community undisturbed by invention and improved machinery, a remnant of the ancient Swabian race, whose political importance has long since departed and whose former warlike proclivities have been changed with the mellowing influence of centuries into the arts of peace. Here dwells a people abiding by the same manners and holding the same customs which their fathers and grandfathers before them held. Germans they all are, but unlike the north German in nearly every respect save in the sturdy qualities of honesty and continuity of purpose—qualities common to the race, speaking a dialect that is scarcely understood by a Prussian or a Saxon.

The dominant impression of this region is made by the forest which crowns every hill and borders every valley. There are no large cities, and hence no great collections or museums containing treasures of art; there are no large estates, and therefore no splendid mansions, as in rural England.

However, the region is not without historic interest. Here and there an ancient cloister that has lent its name to a hamlet or village or stands in some isolated retreat, converted into a dwelling, reminds one of the days of the monks and the vicissitudes through which generations have passed. Indeed, there is scarcely a valley or mountain that has not furnished a legend or folk-tale to German literature.

A few hours' walk to the northwest of Baiersbronn leads into the deep recesses of the forest, and a by-path up the mountain to the weird Mummelsee, the abode of the nixe; and still farther up the Hornisgründe, the highest elevation of the northern district, is to the Black Forest what the Brocken of the Harz mountains is to northern Germany—the abode of witches.

Upon this marshy, elevated plateau, covered with low shrubbery, rush grass, feathermoss, liverwort, and sundew, a solitary watchtower has been erected to guard the traveler from the alluring will-o'-the-wisp, so the credulous inhabitants of the region say; but, as it was built by the state in 1871, it is more likely that its purpose is military, serving as a point of observation in case of a French invasion. However, it affords a splendid view to the peacefully inclined, as it is situated upon the great divide between the Rhine and the Neckar.

Immediately to the west the glassy surface of a mountain lake reflects a castle situated upon its opposite bank, while beyond and below lies the Rhine Valley, dotted with villages and hamlets, and far in the distance, beyond Appenweier, the minster tower of Strassburg, veiled in smoke and haze, rises against the hori-

A HAMLET IN THE BLACK FOREST

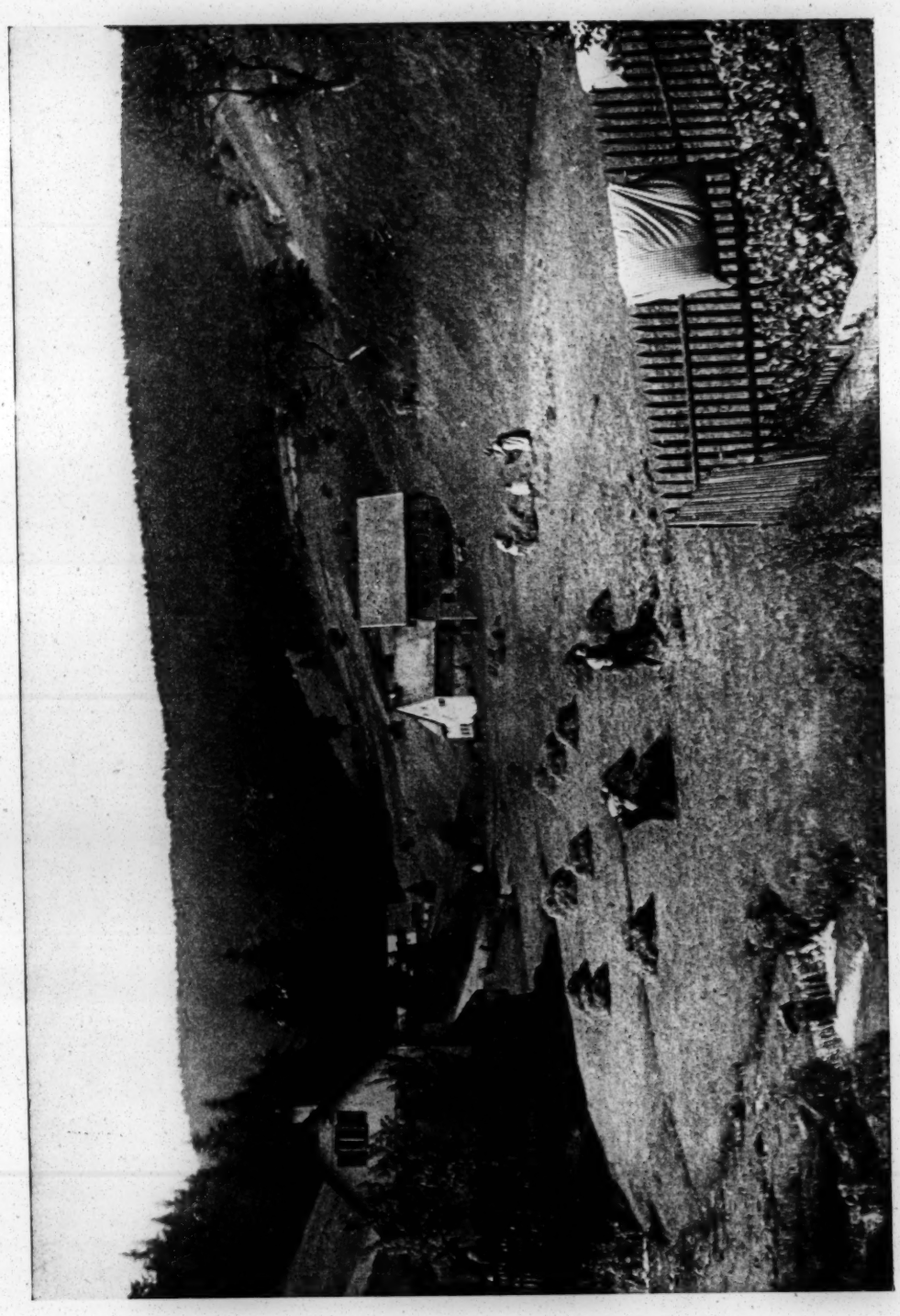
zon. To the east an array of mountain peaks, divided by the valleys of the Murg, Nagold and Neckar, project their forest crowns, and a little to the right and far beyond the Jungfrau and other noted peaks of the distant Alps may be seen, while the great ranges of the Black Forest extend in parallel ridges to the south.

A short journey southwest of Baiersbronn brings one to the source of the Murg River and to the famous "high road" or pass of Kniebis, celebrated during the wars of the French Revolution. This road, paved and graded to bear the heaviest artillery and extending for miles along the crest of the highest mountain ridge, connects the Rhine Valley with the Neckar, was one of the passes used by the French in invading south Germany and was taken by them in 1796 and 1797.

SPLENDID ROADS

Aside from the forest itself, one of the most striking features of the Black Forest district is the magnificent system of roads. Every valley has its stream, and close by the side of every stream the main road, uniformly fifteen feet in width, bends gracefully along its banks and accompanies it from the lower part of the valley far up to where the narrow cleft loses itself in the forest; here it may turn and follow the course of a mountain ridge or it may pierce the divide and descend the opposite slope into the valley beyond.

These roads are even better kept than the roads of rural England; they are more uniform in their width, and their edges are trimmed to the sod with a nicety and precision that reminds one of the roads and walks in the most elaborate



A TYPICAL BLACK FOREST VALE IN JUNE

parks of the great American cities. Here they do not wait until the roads become impassable, nor until a mishap or wreck calls attention to defective road-beds, before repairing them. Their care, intrusted to experienced road-menders who are subject to official inspection, is so systematized that a definite number of men is constantly employed for this purpose. The granite used for their construction and repair is quarried from the neighboring hillside, and this requires additional laborers, while transporting, cording, and crushing the stone at the roadside raises the laboring force necessary to the maintenance of roads to a considerable number—in fact, forestry is the only other occupation in which a greater number of constant laborers is employed; and as forestry is the chief occupation of the inhabitants, the need of numerous well-kept roads of easy gradients is a practical necessity for the transportation of the heavy timbers.

Each road is divided into short sections, and a road-mender is assigned to each section. The menders constantly patrol their beat and vie with each other in keeping their respective sections in faultless condition—free from depressions, trimmed and swept as if constantly expecting company—and all for fifty cents a day. The only perquisite which adds to the small income of these road-menders comes from the sale of the daily sweepings of the road-bed, which is purchased for fertilizing purposes by the farmers along the way; but the result of these sales seldom exceeds $10 a year.

Thus, at a comparatively small expense, a perfect system of highways is maintained. The main roads, which are kept up by the state, and connect valley with valley and crest with crest, and bind the whole Black Forest district into one vast network, are again intersected at various angles and points along their courses by the local roads, kept up by the community; but the plan of construction is the same in all; all show the same scrupulous care. Sometimes they are flanked by raised foot-paths, sometimes by fruit trees, and always, on the side of a steep incline, by stone posts placed at regular intervals.

What the Appian Way was to ancient Rome, what Unter den Linden is to Berlin, these highways are to the Black Forest; they are substitutes for railways and electric lines; they are the post-roads and the streets over which every phase of life of this densely populated community passes, and, being everywhere so uniformly well kept, they lend a tone of prosperity to the general beauteous aspect of the landscape.

POOR BUT COMFORTABLE

It would, however, be erroneous to suppose that the people in general were even in moderate circumstances; with occasional exceptions, the great mass are poor. The remarkable fact is, how general poverty can transform a country into such wondrous beauty, and how, under the limitations placed upon them by nature, all manage to earn a living, for the community is free from the proletarian class. Certain it is that the poetic side of the Black Forest lies in the external beauty of the landscape, in its many-tinted wild flowers, in the song of the brook and the nightingale, in the hum of the mill, in the bright sunshine—in a word, in nature—while the songs of real life are often written in a minor key and a sadder strain.

"How do you manage to live on so small an income?" I asked a communicative road-mender, who informed me that he received only fifty cents a day and had a family of eleven children.

"Well, we get along some way. I also have a small farm of three acres; two cows, three pigs, and a few chickens. The oldest girls work in inns; the boys in factories and some in the forest. Sometimes it's hard, but we live and are contented."

This is the story one frequently hears; it represents the wages and general condition of the average common laborer having a large family, and the number of children to a family is seldom less than seven and not infrequently fifteen.

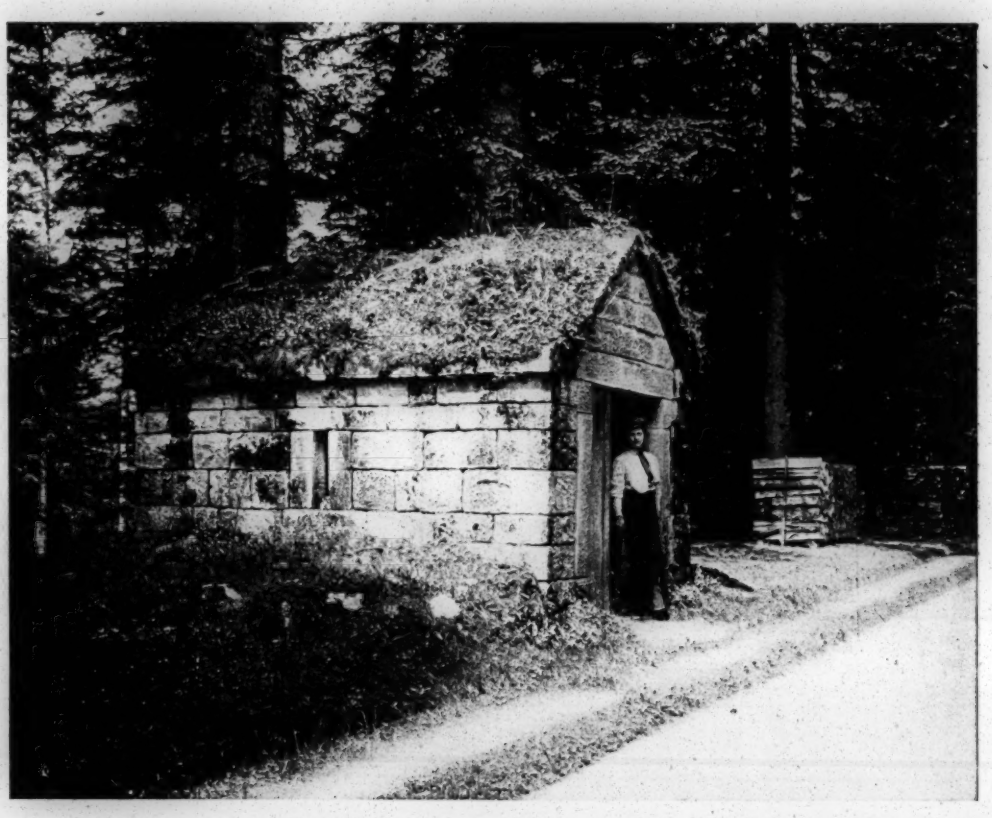
The report of a woodsman, a well-known character of the community, was

A MAIN FOREST ROAD AND ROAD MENDER

more hopeful: "Yes, I have been a woodsman for forty years, and my father was one before me," he explained. "We are all contented, have good health, and are not without pleasure and amusement. I own my home, have seven acres of land, occasionally sell a cow or a pig, and though I average only two marks (fifty cents) a day for perhaps two hundred days in a year, we have saved at least, besides our home, ten thousand marks."

As he delivered himself of this speech he again lighted his Schwarzwald pipe and concluded philosophically, "The main thing is health and contentment, and that we have."

Hotel and inn keepers are often in comfortable circumstances and their families enjoy some of the luxuries of life, while the owners of mills, factories, and other industrial plants are often considered men of wealth. On the other hand, there are those of extreme poverty, who seldom have sufficient plain food to satisfy hunger; but the condition of the great mass of the community may be fairly represented by the road-



A WAYSIDE HUT IN THE FOREST FOR THE PROTECTION OF FOREST WORKMEN AND TRAVELERS

mender and the woodsman quoted above. In other words, the majority of the community is made up of two classes: those who barely make a living and those who have a small annual surplus. Under the restricted circumstances, these results are indeed remarkable, and the manner in which these results are obtained is as instructive as it is interesting.

Every inch of soil is utilized to its utmost capacity; even the rocky slopes of the hillsides, which in America would be a barren waste, are made to yield the giant timbers. The income from the common forest alone pays the salary of all the officials, furnishes the necessary means of maintaining the splendid highways, and in the Gemeinde of Baiersbronn pays to every burgher an annual revenue of thirty-five marks in cash, which he may draw from the public treasury or cancel against his taxes. This does not include the revenue from the royal forest lying within the territory of the local community. Each local governmental unit has a forest of its own, which is managed and cared for by the local officials subject to the general supervision of the state, which provides that both in the royal and in the community forest the amount of timber cut annually shall not exceed the annual growth. It is thus that the forest is perpetuated from generation to generation and that this important industry furnishes constant employment to a definite number of workmen. Forestry thus becomes a science and every man connected with its care and management, from the highest official to the common woodsman, be-

A NURSERY IN THE BLACK FOREST

comes an expert in an occupation which he enters for life.

The same kind of economy which is applied to road-making and forestry is applied with equal skill to farming. The farms are uniformly small, averaging, as a rule, from three to seven acres and ranging in value from two hundred to five hundred dollars per acre. These garden-like patches which fleck the valley, when seen from an elevation, present the appearance of a crazy quilt with a green background. No hedges nor fences intervene to suggest mine and thine, nor is there, as in rural England, an agricultural class distinction. There are no landlords and no tenants, and the entire community is a neighborly congregation, where the land of the villagers and peasants lies side by side and where mutual assistance is freely rendered during the hay and harvest season.

Cattle constitute the chief live-stock of the community, but they are never allowed to graze, being housed winter and summer and fed upon hay and meadow grass cut by the scythe and doled out in quantities to entail the least loss and net the greatest returns.

Every meadow yields annually two crops of hay, and as moisture is a necessary agency to the rapid growth of vegetation, the dry, sloping elevations are often irrigated, while the lower levels are drained by numerous tiny ditches. Thus the mountain brooks, as they emerge from the forest rim in the upper part of the valley, are often walled and led along the upper edge of the fields and meadows to supply the moisture in the absence of rain and to retard the erosion of the alluvial deposits.

Thus every foot of arable land is kept fertile; not a nook nor corner of the

A TYPICAL BLACK FOREST HOME

valley is unproductive; not a hill nor rocky slope but bears the pine or fir. Since the scythe, the hand-rake, and the flail have not been supplanted by improved farm machinery, the chief value of one of these small estates is represented by the land, live-stock, and the buildings upon it, though in many cases the farms are without buildings, their owners being the village cobbler, blacksmith, merchant, or baker. In fact, nearly every family is the owner of a small farm which has been the heirloom for many generations.

But the cultivation of every natural resource and the exclusion of all waste does not alone account for the fact that this region sustains a dense population free from drones, paupers, and dependents; for, aside from the physical and mental unfortunates, there are indeed few who are not self-supporting. Indeed, the greatest cause of the general success of the community lies in the industrious and frugal habits of the inhabitants themselves.

The peasant or wage-earner in the Black Forest would enjoy the luxuries of life, but he first and last measures his own station in life and adjusts his comforts and expenses accordingly. Instead of the expensive cigar, he procures a famous Schwarzwald pipe which lasts him a lifetime. Tobacco at four cents per packet supplies the necessary combustible material. He travels, too, in his narrow circle; but a homely knapsack and a loaf of black bread takes the place of the dining-car meal, and the numerous wayside inns furnish the liquid portion of his meals at prices passing cheap, while for lodging he seldom pays more than a mark. No false pride leads our German peasant to assume a rôle which he cannot play to the end.

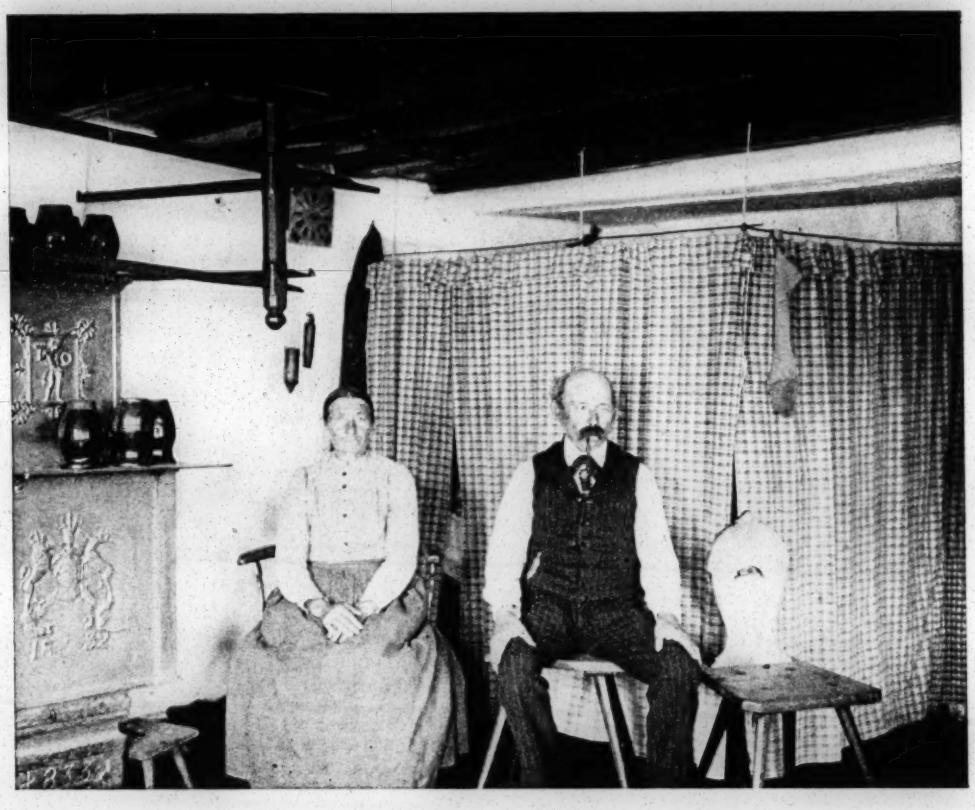
Observe the immigrant and his equipage as he lands in New York or wends his way westward to friends. You see

THE VILLAGE SMITH'S WIFE, WITH FIVE OF HER FOURTEEN CHILDREN

him much as he is in his native land, though you do not understand him, for he is not insensible to the gibes of his new countrymen, nor to the injury he receives at the hands of unscrupulous employment agencies. He is human; thinks and feels the same as those who take advantage of him at every turn, and in America he prospers, not entirely because he is in the "land of the free," but because of habits of frugality and industry acquired in the fatherland and because he lives within his means.

Among his own native hills the chief means of conveyance is the royal post chaise, which contains seats for twelve passengers; but this is seldom crowded and more often empty, for though a mark entitles one to ride a comparatively long distance, few of the inhabitants of this region feel that they could afford to pay the price of a half day's labor when the journey can be accomplished on foot. The hard, macadamized roads are, it is true, wearing upon the ordinary smooth-soled shoe; but here shoes, as all articles of wearing apparel, are made entirely with a view to service. The same style of costumes worn by their fathers and grandfathers are still in vogue, and, judging from the past, will be till the race has run its course.

The purchase of a festive garment is no small event in the life of the average peasant; it becomes a milestone from which he reckons the minor events of his life—not merely because this addition to his stock may be his wedding suit, but because a tailor-made garment represents ten dollars in cash. Little wonder, then, that it is worn only on special occasions and is often handed down from father



A CORNER IN THE LIVING ROOM. THE CURTAINS ENCLOSE THE BED

to son. Economy in dress is but one instance out of many which might be given explaining how a peasant supporting a large family can live, and sometimes even prosper, on an income that would not supply the want of an American under similar conditions. An American laborer spends more in five years for dress than the average laborer in the Black Forest does in a lifetime.

The average home of the peasant exhibits economy in its painful extremity. The furnishings of the rooms are reduced to an uninviting limit. A stove, a table, a few plain wooden chairs, and a long bench constitute the chief articles of furniture in the living room, which sometimes also contains a bed. The walls are hung with a few pictures, and a large wooden clock, serving as a useful ornament in every home, sometimes relieves the gloomy appearance; but the bare floors and the low ceilings form an oppressive contrast to the beautiful out-of-door landscape, with its green meadows and blue-vaulted sky resting on the forest-crowned hills.

The interior of a home is seldom attractive, and as farm houses here never have a modern system of plumbing or ventilation, the odors from the stables, which sometimes permeate every room, cause you to sigh for the out-of-doors. Nor is the unattractive interior due to lack of cleanliness, but rather to the plan of construction of the house. Many of these houses are centuries old, and the present occupants must make the most of their inheritance.

The same roof which protects the family shelters the live-stock, hay, grain, and the simple farm implements. The base-

XUM

WOMEN ON THEIR WAY TO WORK IN THE FOREST

ON THE ROAD TO THE HAY FIELD. CATTLE ARE USUALLY EMPLOYED FOR TRANSPORTATION PURPOSES

ment is used for live-stock and implements; the first story, entered from an outside stairway, is the family abode, while the loft, from front to rear, contains the hay and grain.

The peasant thus dwelling in mutual concord with his cow and his ox is not prepared for guests. In fact, no private dwelling is constructed with a view to receiving friends. The inns are for this purpose; they form the social centers or meeting places of the neighborly groups of the community.

But in nothing is poverty and economy shown more than in the frugal meals, served five times a day. Coffee, black bread, butter, milk, potato soup, with an occasional omelet and salad, would be considered a wide latitude in a daily bill of fare, while a single article of diet, such as potato soup, will often constitute the entire meal. In many homes meat is served only on special holidays, and in practically no home do we find it in satisfying quantities. A home-made brew or fermented beverage, however, is never wanting and is always offered—perhaps with a callous hand, but with a warm heart and cordial hospitality—to the friends or chance strangers who enter the home.

The limited means in the household economy bear most heavily upon the wife, for the husband must devote his entire time to work in the factory or forest in order to meet the necessary expenses involved in the support of a large family. The woman, therefore, enlists our sympathy. The care of a large family, one would think, would alone be sufficient to occupy her attention. But the burdens of motherhood are by no means the greatest, for children here are never spoiled by attention; like "Topsy," in Uncle Tom's Cabin, they "just grow" and take care of themselves and seem to be none the worse for it. All the drudgery about the little farm falls to her care, and if at times, as during the haying season, she is assisted by the men, she never shrinks from performing her part of the most arduous tasks.

And neither youth nor age exempts the weaker sex from man's labor on the farm. I have seen the young girl of fifteen years, in company with her stooped and decrepit grandmother of seventy, swing the scythe to the rhythmic measure of the lords of the household. As the limited means and views of woman prevent her from realizing her true condition, she patiently submits, and even seems to enjoy her routine labor. In fact, she would be ill at ease if she were treated with that consideration which American women enjoy. An incident may serve to illustrate her own estimate of her duty and position.

I had left a piece of luggage for several days at a remote little farm house, and when I returned for it I observed that the "Hausfrau" was preparing to carry my load to the station. Determined, however, for once, to inaugurate an American custom, I proceeded to take my luggage, when she exclaimed in mortified astonishment,

"What! you carry your own luggage; what would the people of the dorf think of me if I allowed it?"

"Tell your people I am an American," I replied.

She looked puzzled; she could not understand it. "What! don't the women in America do such things for the men?"

"No," said I, "and they shall not do it for me here."

And then it dawned upon her: "What a paradise America must be!" And the tears came to her eyes and she seemed to realize, perhaps for the first time in her life, the hard lot of woman.

Children, too, are early taught to work, and when not in the *Volksschule,* which compels their attendance until they are fourteen years of age, they are employed in light work in the forest or field.

Barefooted little girls at seven years of age may be seen knitting, and at the age of ten, with motherly solicitude, taking care of the babies. Nor does the seeming lack of parental attention have a deteriorating effect upon them; at least they are free from the brazen impertinence so common among American children, and, unless chilled into silence by

THE MAIN STREET OF BAIERSBRONN, IN THE BLACK FOREST

your strange presence, they always salute you with a *"Grüss Gott"* in meeting you upon the highway.

But whatever restrictions the hard, routine labor places upon the inhabitants, they are not without recreation, religious life, and amusements; not without their social gatherings at the inns, not without their folk-songs, and not entirely without a knowledge of the outside world.

Every child attends the Sunday school; practically every adult is a member of the Lutheran Church. The parish minister, therefore, who is appointed and paid by the state, is an important personage and wields a powerful influence over the thought and life of the community. In addition to his religious duties, he is general supervising inspector of the public schools. This position gives him a special opportunity to direct the religious instruction of the youth.

Next to him in importance is the schoolmaster, coöperating with the minister in sacred as well as secular instruction; for he not only directs the music of the church service, but is the regularly appointed Sunday-school teacher. For this service, however, he receives extra pay, and as a consequence regards this part of his work as seriously as that of his regular school duties. Religious instruction of the youth is, therefore, thorough and systematic; in it every child must follow a regular course leading to the "confirmation" certificate, which represents the completion of the biblical instruction.

But while the minister is supported by the state, except occasional voluntary contributions for private ministrations, the church edifice itself is raised by voluntary gifts from the members. By nature and training intensely religious, the inhabitants lend a willing support to an institution which strengthens their faith in a future life as rich and perfect as the present life is destitute and incomplete.

THE CELEBRATION AT MITTELTAL (SEE PAGE 649)

The chimes in the little Gothic tower which announces the hour of worship each Sunday morning summon willing worshipers; troops of men, bareheaded women, and barefooted children flock with unequal paces to the temple of worship, cheerily chatting along the way. In the corridor of the church they separate—the men occupy the galleries; the women, the nave, while the children flank the altar, the girls occupying the right and the boys the left. Thus grouped about him, the minister may conveniently address his remarks to any age or sex.

The sermon is usually on the old-fashioned order, against that old fashion inaugurated by Adam—sin; and the congregation leaves the church with a stronger faith in that still older fashion—immortality.

Betrothals are announced by the minister from the pulpit with a request for the prayers of the church for the guidance of the newly plighted; and after the service the congregation waits in front of the entrance while the clerk of the community announces the new edicts and laws of the mayor and council that may have been issued during the past week.

The Sabbath, however, is not the only day which brings immunity from toil; the observance of some national event or the celebration of some local society occasionally interposes a holiday. Once every year entrance examinations for the army are held in the various localities, and this furnishes the occasion for general hilarity among the young men who have passed the examination successfully and are to enter the military life for two years.

I have recorded in my notes a typical festive occasion, the events of a bright day in June. We were awakened early

in the morning by the roll of the drum and the tramp of the march. It was "flag day;" a *Sangverein* was to christen its banner, and nothing short of a holiday was required for this important event. Local singing societies from the neighboring valleys were to meet, form a grand union and adopt a common banner, and this event was to be celebrated in a little village called Mitteltal. The local organization of this place had been preparing for some time, and today their little band of musicians was up early to practice marching. The day had been hailed with delight by the children, for there was something doing now. The main roads to the little town had been spanned by triumphal arches; the houses along the way decorated with wreaths and garlands as a token of respect, and the inhabitants had donned their best clothes. No triumphal procession ever passed through the famous Brandenburg gate at Berlin with a stronger consciousness of honors deserved than did that band of peasants on this occasion. And why should they not? The pomp and ceremony of kings and emperors are but adulations of self, after all; and if perchance a royal procession be composed of victorious legions home from conquest, why should war—official murder—be extolled above the simple annals of a peaceful life transcribed in song? Nor have these peaceful citizens of the fatherland been deaf to their country's call to arms. In 1870 these peasants laid down their lives at Gravelotte, fought valiantly at Sedan, and marched on to Paris as willingly as now they wear the badge of their *Verein*.

One may roughly describe the people, their customs, occupations, ambitions, and ideals; but the beauty of their country is beyond the pen or brush of the artist. A botanist might name the wild flowers, but no picture can convey to another mind the fragrance of the newmown hay nor the thousand varied colors of the wild flowers that smile from the valley in June. In fact, many flowers that are cultivated for their beauty in rougher climates grow wild here. Small varieties of variegated pansies and delicate, sweet-scented pinks grow in abundance. The green meadows, the murmuring streams abounding in trout, the hills crowned with the forest whose dark-tinted foliage has given the region its name—*Schwarzwald;* the song of the birds, the occasional sight of the roe and the fawn, and, above all, the calm air and the bright sunshine—these are some of the charms of nature among which this people dwells.

HOW THE WORLD IS SHOD

NOT quite so varied as the head covering but fully as characteristic and interesting are the peculiar styles of footgear worn by the nations of the earth. Undoubtedly the shoe of today had its origin in the sandal or sole devised for the double purpose of protecting the bottom of the feet from rough ground and extremes of temperature.

Sandals and shoes of papyrus and leather of beautiful workmanship worn by the early Egyptians are treasured in the British Museum. The ancient Hebrew wore a sandal with a sole of leather, cloth, or wood occasionally shod with iron. The Greek κρηπις, Latin *crepida,* occupied a middle position between a closed boot and a plain sandal; its simplest form had a high and strong sole often studded with nails. About the heel of the *crepida* was a series of loops into which the thong was laced across the top of the foot and through the toe strap; this was worn mostly by the greatest pedestrians, the workman and the soldier.

Another primitive form of shoe is the Indian moccasin of buckskin, soft and flexible, a splendid foot covering, but of little use, however, in a wet country, so the Aborigines of America above the Arctic Circle had recourse to sealskin cured without sweating and fishskin to keep the feet dry, while the sabot, the clog, and the chopine show how western Europe wrestled with the problem of the very essential foot covering. Among the great industries of the United States the manufacture of boots and shoes ranks tenth, for the year 1905 the total output of boots and shoes in this country being 242,110,035 pairs, representing a value of $320,170,458.

Photo and Copyright by Underwood & Underwood, New York

HIGH LEATHER BOOTS WORN IN RUSSIA, MADE NECESSARY BY THE ILL-KEPT COUNTRY ROADS

Photo and Copyright by Underwood & Underwood, New York

AN OUT-DOOR SHOE FACTORY IN FRANCE

These Breton peasants work all day in the forest on heavy wooden sabots, the men doing the heavier parts of the work and the women putting on the finishing touches

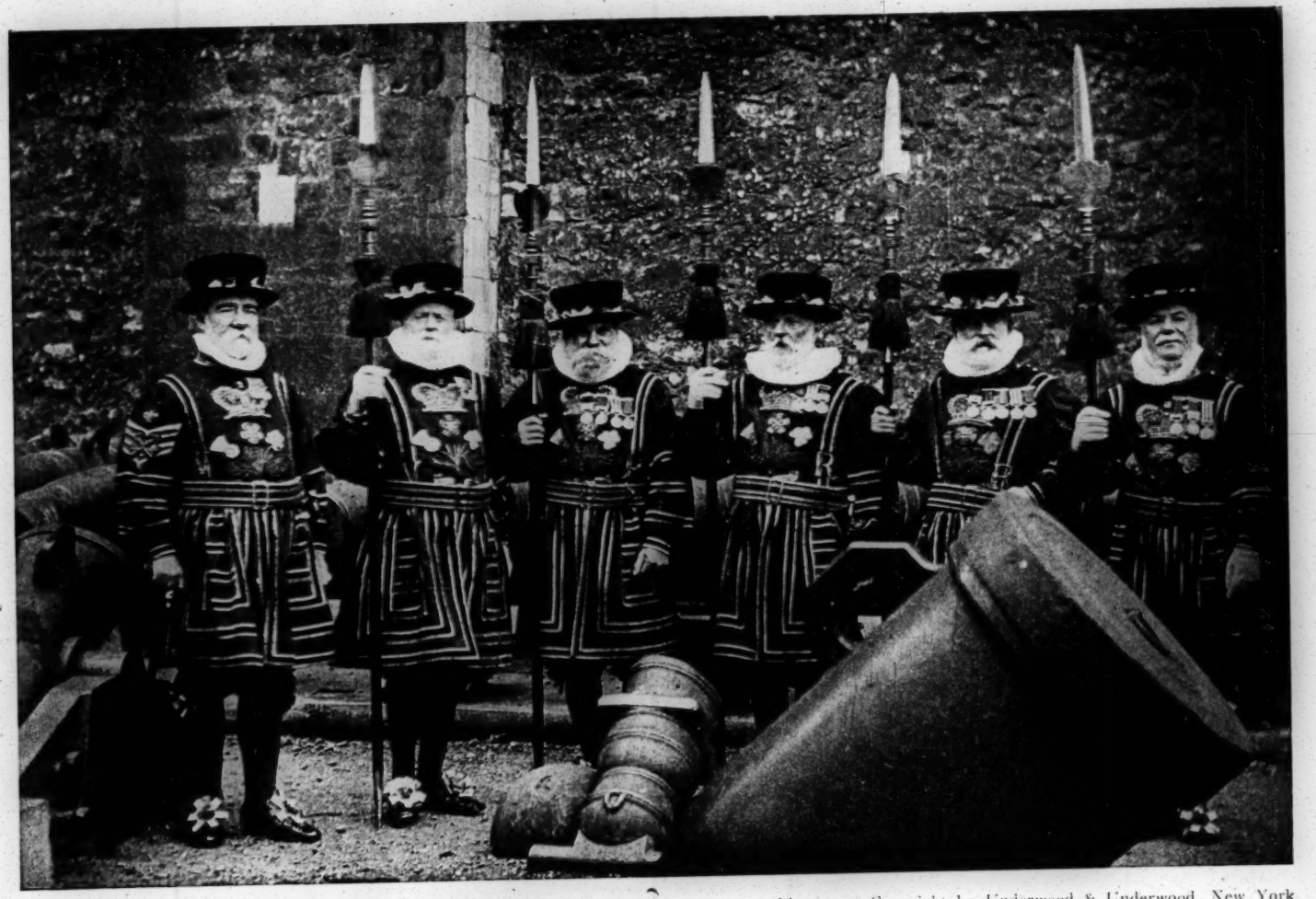


Photo and Copyright by Underwood & Underwood, New York

A MEDIEVAL STYLE OF SHOE STILL IN USE

The footgear of the guard at the Tower of London is identical with that worn by their predecessors in the time of Henry VIII

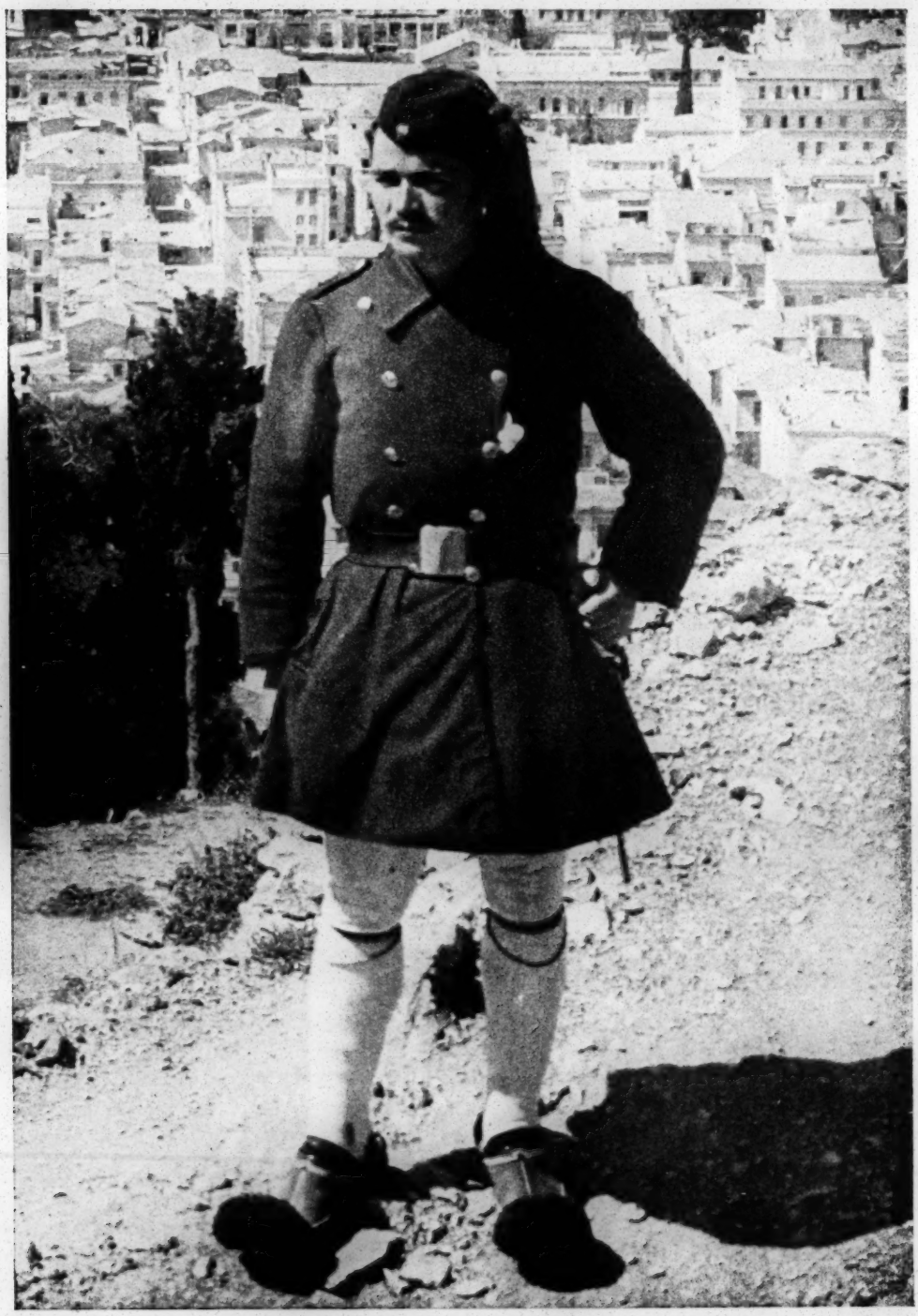


Photo and Copyright by Underwood & Underwood, New York

RED LEATHER SHOES WITH HUGE POMPONS EMPHASIZING THE UP-TURNED TOES WORN BY THE QUEEN'S GUARDS IN ATHENS

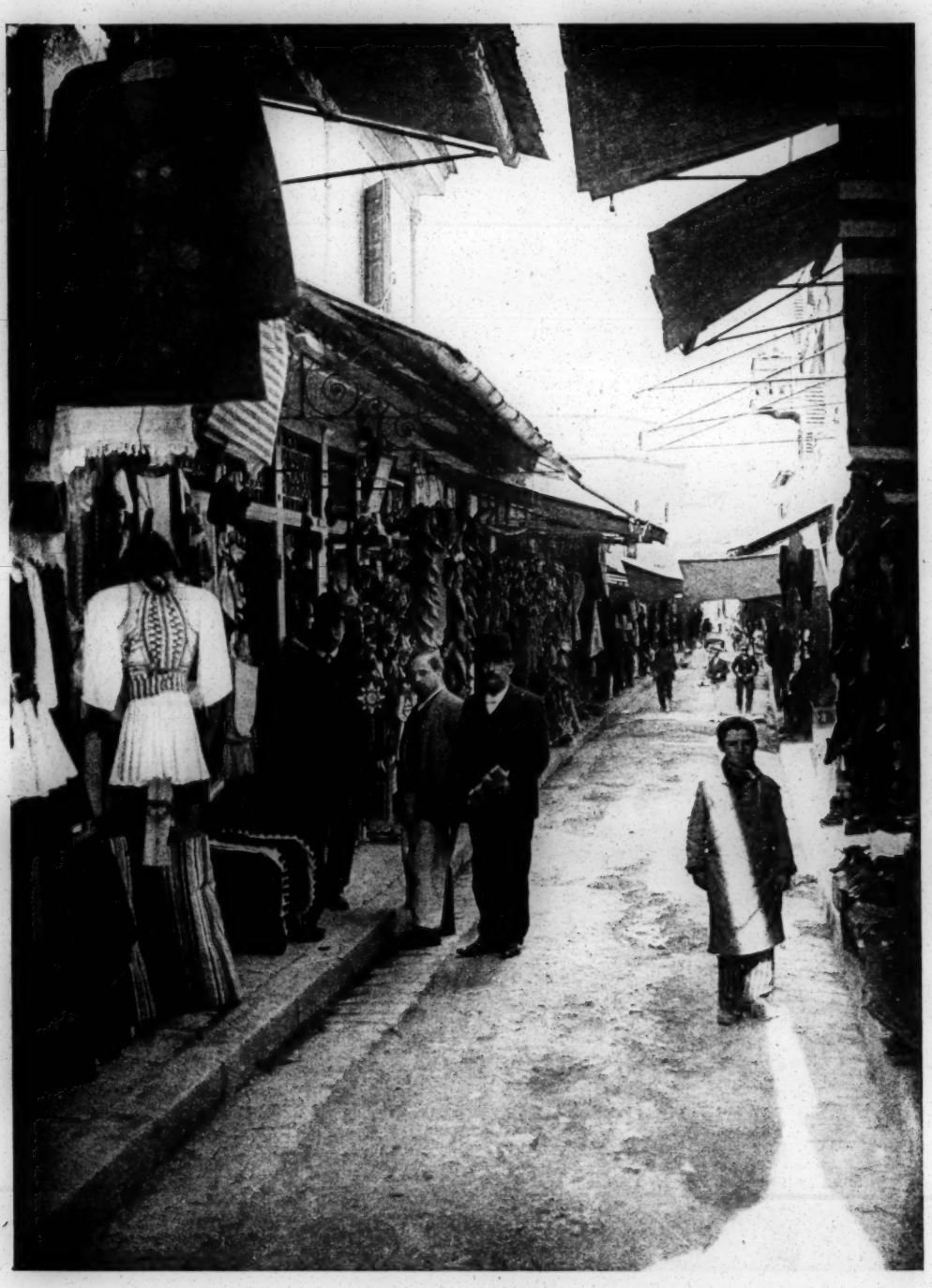


Photo and Copyright by Underwood & Underwood, New York

A STREET OF SHOE STORES IN ATHENS

Artisans and retail shop-keepers in Greece nearly always group themselves in this way by trades, instead of scattering so as to divide custom

Photo and Copyright by Underwood & Underwood, New York

A CHINESE SHOE STALL IN A CITY MARKET. THIS DEALER CATERS ONLY TO MASCULINE CUSTOMERS

Photo and Copyright by Underwood & Underwood, New York

TINY SHOES OF FINE KID AND SILK EMBROIDERY WORN BY CHINESE LADIES OF THE UPPER CLASSES IN CANTON

Photo and Copyright by Underwood & Underwood, New York

PROBABLY THE ODDEST SHOES IN THE WORLD, BEING A FLAT BLOCK WITH A LARGE KNOB WHICH SLIPS BETWEEN THE FIRST AND SECOND TOES

This shoe is worn by the low classes in India

Photo and Copyright by Underwood & Underwood, New York

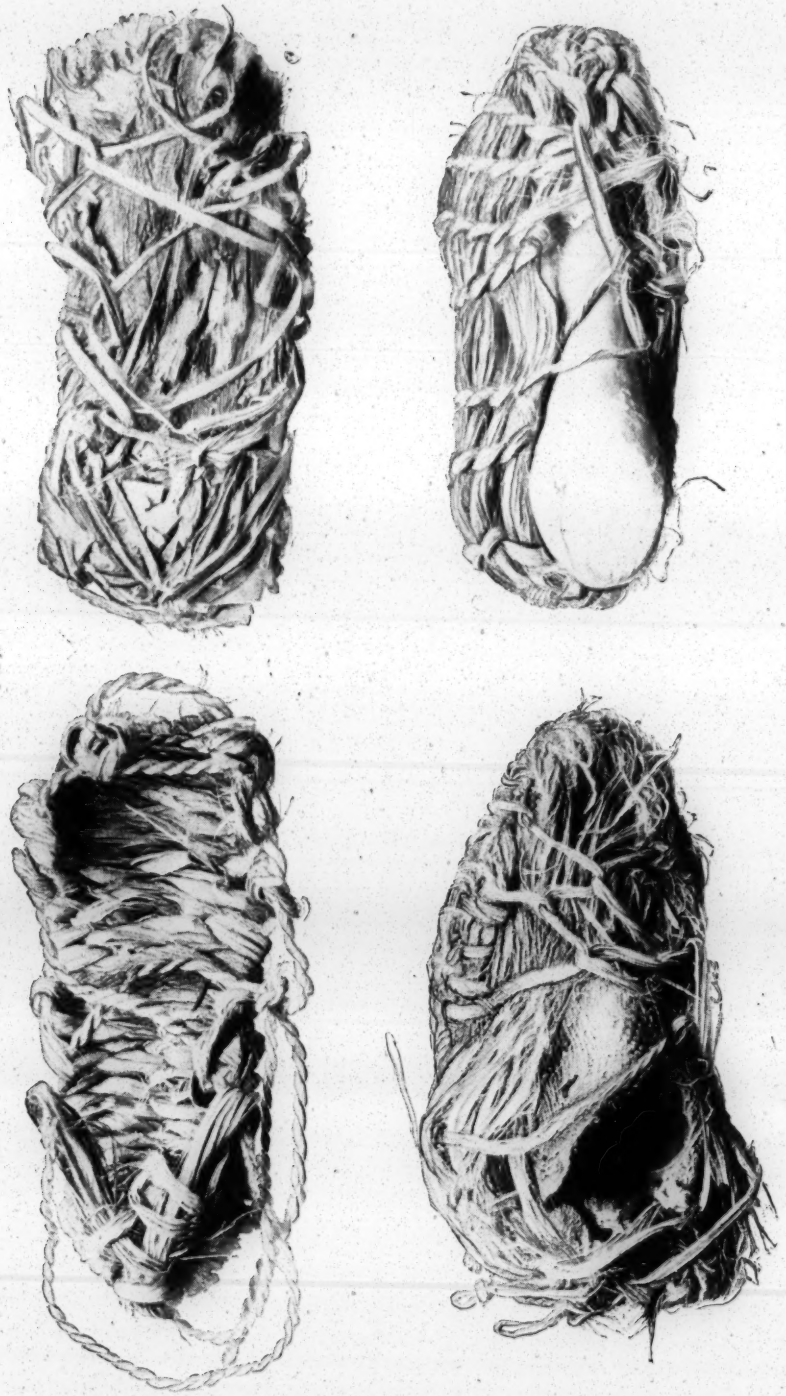
BARGAIN SALE OF JAPANESE CLOGS AND SANDALS AT A SHOP IN TOKYO

The sandals with straw soles cost only a few cents. The padded strap passes between the big toe and the rest of the toes. The wooden clogs, especially useful in muddy or snowy weather, are held in place by similar straps. This very slight attachment to the foot is practically necessary, as all shoes are removed on entering any temple, shop, or dwelling-house, even the humblest sort.

Photos by courtesy of the Regal Shoe Co.

DEPARTMENTS IN ONE OF THE LARGEST HIGH-GRADE SHOE MANUFACTORIES IN THE UNITED STATES

Cutting and fitting departments where the heels and soles are cut out by perfected machinery and linings are fitted and sewed to uppers. This establishment employs more than 4,000 skilled shoe workers.



FOOTGEAR OF ANCIENT CLIFF-DWELLERS, FOUND IN ARIZONA

Sandal with marginal loops for lacing the sole is made of yucca leaves six-ply, with an insole of corn husks

TEN YEARS OF THE PEARY ARCTIC CLUB

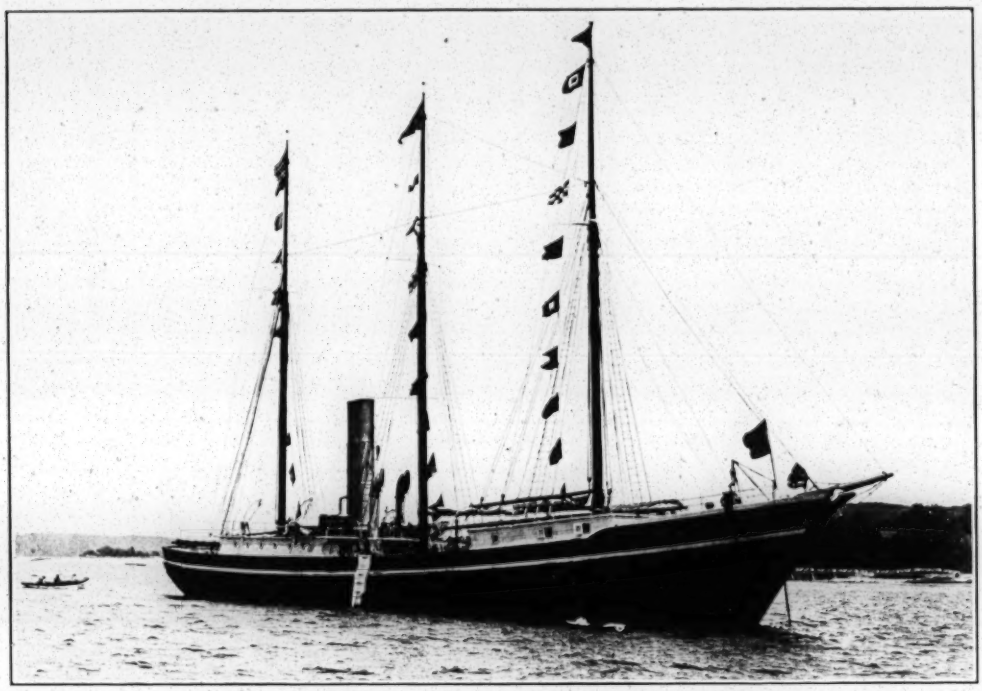
By Herbert L. Bridgman

Secretary of the Club, Read at the Ninth International Geographic Congress, at Geneva, Switzerland, July 27–August 5, 1908

ALTHOUGH the Peary Arctic Club has not yet fully completed its work, it willingly improves the opportunity of the Ninth International Congress to place in the permanent records of geographical progress a brief résumé of its history and deeds for its first decade. The Club, unique and unprecedented in organization and methods, was the product of circumstances, and, though designed for a special field and a definite task, has a charter of broad powers and permanent value. Founded and brought into activity as an ally and resource of Commander Peary in his quest for the North Pole, it has demonstrated by ten years of continuous, unceasing labor the efficiency of its organization and the wisdom of personal responsibility and direct connection between cause and effect. When its present work shall be completed its legal and chartered powers will continue in perpetuity, and its experience and prestige may be made valuable assets to its successors, no matter in what field, in what lands or seas, they may choose to prosecute exploration and discovery.

The times were ripe ten years ago for the Peary Arctic Club. The new expedition, prefaced by seven years of successful work in Greenland, had been sanctioned by the geographical authorities; leave from the public service had been granted; the *Windward* was on her way from England, and the date for departure approached. Already Peary had four times traversed the inland ice-cap of Greenland, and in the judgment of both American and Royal geographers demonstrated its insularity—a judgment ratified by gold medals from each society; the three great meteorites, Dog, Tent, and Woman, had been brought from their cradles; the Eskimo by kindness and humanity had been won to faithful and loyal alliance and, having had a year for preparation, were awaiting the arrival of their leader. The imperative need of the hour was an effective, responsible organization, which would provide the means and, not less important, organize and direct all the support and interest which might be developed among the American people. The original plan was twenty-five subscriptions of $1,000 each for four years, and with this list but partially filled, with the expectation that the vacancies would before long be made up and organization perfected, Peary sailed from New York July 4, 1898, on the *Windward,* and a few days later, accompanied by the auxiliary *Hope,* from Sydney, Nova Scotia. The ships parted August 12, off Etah, north Greenland, the *Windward* to winter in Allman Bay, the *Hope* to return to her home port, Saint Johns, Newfoundland. Both are now at the bottom, the *Hope,* lost in 1900, drifting helpless in a floe on a reef near the Magdalens, in the Gulf of Saint Lawrence, and the *Windward,* renewing the rôle of her early days, as a Dundee whaler, having been driven on a ledge near the Carey Islands June 15, 1907, sinking in the very waters which she had often traversed in safety. The *Eagle* (1886) and the *Falcon* (1892 and 1894), of the Peary ships, also lie now on the floor of the sea.

The subscribers supporting the expedition, upon which Commander Peary more than six months before had left for the North, met for the first time January 30, 1899—by chance, Friday—at 44 Pine Street, New York, and organized the Peary Arctic Club, electing as its president Morris K. Jesup, who held the office from that date until his death. A brief and succinct constitution was adopted, which set forth as the objects of the Club, "to promote and encourage



COMMANDER PEARY'S SHIP, THE "ROOSEVELT"

The first American ship built specially for Arctic exploration. She is now northward bound for the winter quarters of Peary's expedition on the north side of Grant Land

explorations of the Polar regions, as set forth in Lieut. R. E. Peary's letter to the American Geographical Society, dated January 14, 1897, and to assist him in the completion of the geography of the same; to receive and collect such objects of scientific interest or otherwise as may be obtainable through Lieutenant Peary's present expedition, or other expeditions of like nature; to receive, collect, and keep on file narratives and manuscripts relative to Arctic explorations; to preserve such records and keep such accounts as may be necessary for the purposes of the association; and, further, to command in its work the resources of mutual acquaintance and social intercourse."

Contributors to the Peary Expedition of 1898 were constituted founders of the Club, and the approval of a majority of them was prescribed as a condition of future membership. Alfred C. Harmsworth, Esq., now Lord Northcliffe, was elected, in recognition of his gift of the *Windward*, an honorary member, the only one the Club has ever had, and after formalities had been completed the work of the approaching season was thoroughly canvassed. Clear and unanimous agreement was developed from the beginning that an auxiliary steamer should be sent north during the summer to communicate with Commander Peary, to take sufficient stores and material to meet any emergency which should arise, and to demonstrate that the support of the Club was practical and efficient.

Preparations were actively prosecuted, and on July 21, 1899, the *Diana*, in charge of H. L. Bridgman, Secretary of the Club, and Capt. Samuel W. Bartlett, as master, steamed out of Sydney, Nova Scotia, for the North, having on board nearly fifty tons of supplies and equipment, filling requisitions of Commander Peary. It

was necessary to provide in the first place for the party of the *Diana* for at least a year, as her return, like that of all other Arctic-bound steamers, was uncertain; for the company of the *Windward* in case she should be met at the North, and to deposit for Peary and his party subsistence for at least two years. Nothing else would adequately meet the contingencies, which were further increased by the presence on the *Diana* of a party of Princeton University scientists, led by Prof. William Libbey and another sportsman, together with Robert Stein, of Washington, D. C., with two associates and supplies, who were landed at Payer Harbor, near Cape Sabine.

Etah was reached August 5, and on the next morning a characteristic letter and instructions from Commander Peary were taken from a bamboo pole, surrounded by rocks, on the summit of Littleton Island, the most northern post-office in the world. A week later junction was effected with the *Windward,* when her winter's imprisonment in Allman Bay and Commander Peary's mid-winter marches along the ice-foot of Fort Conger and his sufferings and disabilty from frost-bite were for the first time learned. The *Diana,* having gathered dogs and equipment from the native settlements and discharged her entire cargo on the rocky knoll of Etah, returned on schedule time to Sydney, and was followed a few days later by the *Windward* to Brigus, Newfoundland, where she was laid up for the winter.

Repairs having been effected, the *Windward,* with Mrs Peary and Marie Ahnighito Peary on board, was dispatched in July, 1900, from Sydney a second time for the North, from which came that season no returning word. Therefore, early in 1901, the Club began to bestir itself to discover the fate of its leader, then almost two years isolated, and of the *Windward,* from which nothing had been heard since departure from Sydney. The former Hudson Bay steamer *Erik* was chartered, dispatched July 18, 1901, from Sydney, and on the morning of August 5 steamed into Foulke Fjord, where she found at anchor the *Windward,* which a few days before had broken out of her winter ice prison at Payer Harbor, with Commander Peary, Mrs Peary and the entire party, American and native, on board. The following characteristic letter by Commander Peary, written on the chance that he might not meet the auxiliary ship, was delivered by him in person:

CONGER, *April* 4, 1901.

MY DEAR BRIDGMAN:

It gives me great pleasure to present to the Club the results of the work of 1900.

First. The rounding of the northern limit of the Greenland Archipelago, the most northerly known land in the world, probably the most northerly land.

Second. The highest latitude yet attained in the Western Hemisphere (83 degrees 50 minutes north).

Third. The determination of the origin of the so-called paleocrystic ice (floe berg), etc., etc.

Considering that I am an old man, have one broken leg and only three toes, and that my starting point was Etah, I feel that this was doing tolerably well. It is almost 1,000 years since Erik the Red first sighted the southern extremity of the archipelago, and from that time Norwegians, Dutch, Danes, Swedes, Englishmen, Scotchmen, and Americans have crept gradually northward up its shores until at last, through the instrumentality and liberality of the Club, its northern cape has been lifted out of the Arctic mists and obscurity. It seems fitting that this event, characterized by Sir Clements Markham as second in importance only to the attainment of the Pole itself, should fall in the closing year of the century. If I do not capture the Pole itself in this spring campaign, I shall try it again next spring.

My gratitude and respects to all the members of the Club.

Always most sincerely, PEARY.

Six weeks later the *Erik,* after a desperate struggle with the ice, prevented from reaching headquarters at Cape Sabine, landed Commander Peary and his party on August 26 in a temporary camp, in Herschel Bay, Ellesmere Land, whence he later marched to headquarters, and, followed by the *Windward,* returned to Sydney late in September.

The next year, 1902, the *Windward,* having received at Newburg, New York, new engines and boilers, and commanded by Capt. Samuel W. Bartlett, entered for

the third time the portals of Smith Sound, and on August 5, improving a fortunate few hours of open water, succeeded in embarking, at Payer Harbor, Commander Peary, homeward bound after four years' absence, and reached Sydney safely, with his comrades of 1898, on September 15, closing the first chapter and the definitive obligations of the subscribers, the founders of the Peary Arctic Club.

A season of rest, but not of inaction, followed. The work of the *Windward* and her power, or rather lack of it, having been demonstrated in serious Arctic work, the steamer was sold early in 1903 to a Norwegian purchaser, who later restored her, for a consideration, to owners in her native Scotland. Commander Peary, having secured in September, 1904, further leave of absence from the service to prosecute and complete the work of his life, immediately began preparations for the construction of a ship which could meet the difficulties and could perform the service and could break down the barriers which had so far stopped advance to the North.

Commander Peary's application for leave, and the correspondence incident to it, between him and the Department, are so characteristic, and present so fully and clearly his plans and purposes, and show so faithfully his methods of reasoning that, perhaps, the best idea of all may be gained from these extracts, here published for the first time:

DEPARTMENT OF THE NAVY,
BUREAU OF YARDS AND DOCKS,
WASHINGTON, D. C., *September 2*, 1903.

SIR: Referring to my application for leave of absence accompanying this, I beg to state for your information that I propose to secure a suitable ship, put her into one of our best ship yards, have her reinforced and strengthened to the maximum degree and fitted with American engines possessing the maximum of strength and power with the minimum of weight and space, so that she may go north as an exponent of American skill and mechanical ability.

With such ship I should sail north about the 1st of next July, and on reaching the Whale Sound region should take on board my Eskimos, establish my permanent sub-base at Cape Sabine, and then force my way northward to my proposed winter quarters on the northern shore of Grant Land, establishing caches as far as practicable en route. By the earliest returning light of the following February I should start due north over the Polar pack with a small light pioneer party, followed by a large heavy main party. I should expect to accomplish the distance to the Pole and return in about one hundred days or a little more, an average travel of about ten miles per day. Returning, I should break the ship out late in the same season and return home.

If ice conditions the first year were such as to prevent reaching the northern shore of Grant Land, I should winter as far north as practicable and force the ship to the desired location the following year. In this event the expedition would be gone two years.

This plan is the result of some twelve years of almost continuous experience in those latitudes, and is based upon an extended personal acquaintance with the region from Sabine to 84 degree north latitude and a thorough familiarity with climatic and other conditions and with the Eskimos.

The distinctive features of my plan are: The use of individual sledges with comparatively light loads, drawn by dogs, giving a traveling unit of high speed and radius of reach, as opposed to the man sledge, with its heavy load, slow speed, and limited radius; the adoption of Eskimo methods and costume, and the fullest utilization of the Eskimos themselves.

I beg to state for your consideration the following:

The North Pole is the last great geographical prize the earth has to offer. Its attainment will be accepted as the sign of man's final physical conquest of the globe, and it will always stand as one of the great milestones in the world's history.

The attainment of the North Pole is, in my opinion, our manifest privilege and duty. Its attainment by another country would be in the light of a reproach and criticism.

The sense of all the foremost geographers—practical and theoretical—now converges upon the Smith Sound or American Route, along which I have been working for years past. Other routes have been eliminated. If we delay in preëmpting this route, some one else will step in and win the prize.

I believe that my experience, gained in years of practical work; my special methods of travel and equipment, the evolution of years of practical work; my personal acquaintance with every feature of my chosen route and region, and my command of the full resources and utmost efforts of the entire little tribe of Whale Sound Hyperboreans, who have lived and worked with me for years, give substantial reasons for anticipating a successful outcome to an expedition based on the above lines.

Respectfully,
(Signed) R. E. PEARY,
Civil Engineer, U. S. N.

TO THE SECRETARY OF THE NAVY.

THE PRESIDENT BIDDING "GOD SPEED" TO THE INTREPID CREW OF THE "ROOSEVELT"

NAVY DEPARTMENT,
WASHINGTON, *September* 5, 1903.

DEAR SIR: In granting you leave of absence for the purpose of prosecuting your Arctic work, I am moved to remark that I believe you are better equipped than any other person in the country to undertake this work. You have the requisite courage, fortitude, and physique. You have had a longer term of service within the Arctic Circle than any other explorer. You have had large experience in sledge journeying, both upon the land and upon the polar pack. You are familiar with ice conditions through the Smith Sound route and north of Grant Land and the continent. You have demonstrated your ability to maintain yourself in this latitude for a longer period in health and safety than any other explorer. You have reduced the inconveniences and hardships of Arctic service to a minimum. You are conversant with the language and customs of the Whale Sound Eskimo and are personally acquainted with every individual in the tribe. They have become accustomed to your leadership, and if you succeed in transporting the selected hunters and the best families to the north shore of Grant Land, as you propose, you will thereby establish a base which will enable you to live in safety and comparative comfort for an indefinite period.

Grant Land as such a base has great advantages over Spitzbergen or Franz Josef Land, or any other known point, in that it has an extensive shore line, which a party retreating from the Pole cannot fail to find, whatever may be the extent of the polar drift.

The attainment of the Pole should be your main object. Nothing short will suffice. The discovery of the poles is all that remains to complete the map of the world. That map should be completed in our generation and by our countrymen. If it is claimed that the enterprise is fraught with danger and privation, the answer is that geographical discovery in all ages has been purchased at the price of heroic courage and noble sacrifice. Our national pride is involved in the undertaking, and this department expects that you will accomplish your purpose and bring further distinction to a service of illustrious traditions.

In conclusion, I am pleased to inform you that the President of the United States sympathizes with your cause and approves the enterprise. With best wishes for your health and confidence in your success, I am,

Respectfully,

(Signed) CHARLES H. DARLING,
Acting Secretary.

ROBERT E. PEARY,
Civil Engineer, U. S. Navy,
Washington, D. C.

Plans were made for a ship which should combine the necessary qualities of power, the smallest consumption, and the largest capacity for coal, of a model which should withstand shock and pressure, which should surmount and crush floes, which should respond on call with full power of engines—in short, a ship which should be the product of actual experience. The keel of the new steamer was laid late in the fall by Capt. Charles B. Dix, in a Bucksport, Maine, yard, and on March 17 the *Roosevelt,* christened by Mrs Peary, was launched. Engines and boilers were installed at Portland in June, and on July 4, 1905, amid cheers and whistles and the waving of flags and signals, the *Roosevelt,* first American Arctic vessel for more than a generation, steamed out of New York harbor for the North.

Sixteen months later a wireless message informed the world that the *Roosevelt,* having wintered farther north than any ship in the Western Hemisphere, was at Hopedale, Labrador, crippled and short of coal, Commander Peary having attained 87.6°, a new "nearest the Pole," and all on board well. A month later, and after a slow, difficult, and laborious voyage, the *Roosevelt,* entering New York Harbor by its East River gate, was towed to her old anchorage at the foot of West Forty-second Street, and the expedition of 1905–1906 was ended.

Coincident with the construction of the *Roosevelt* and profiting by experience, the Peary Arctic Club was incorporated April 25, 1904, under the laws of the State of New York, with larger powers, greater efficiency, and other advantages. The definite business of the new organization, of which Morris K. Jesup, John H. Flagler, Anton A. Raven, Henry Parish, Herbert L. Bridgman, and Robert E. Peary were incorporators, was stated in the charter to be "To aid and assist in forming and maintaining certain expeditions to be placed under Commander Robert E. Peary, U. S. N., with the object of continuing his explorations of the polar regions and his completing the geographical data of the same; receiving and collecting such objects of scientific interest as may be obtainable through such expeditions; collecting, receiving, and preserving narratives and manuscripts relating to Arctic exploration in general; soliciting and administering funds for the maintenance of such expeditions, and in general providing funds for Commander Peary's efforts to reach the farthest northern point on the Western Hemisphere, and to cooperate with any other assistant for the same purpose."

It is not the purpose of this paper to speak in detail of the field work of the Peary Arctic Club; that belongs of right to the man who did it; but it may be proper to present here a brief résumé, or a statement of net results on the sea, ice, and land.

Fourteen times the ships of the Club have traversed boisterous Davis Straits, conquered Melville Bay, and established Sydney–Etah service with almost the regularity of transatlantic liners. The total mileage of these voyages, not including the fifteenth, upon which the *Roosevelt* is now engaged, would be probably not far from 50,000 miles, or sufficient twice to circumnavigate the globe; of the eight ships, one-half have met their fate (after passing out of the Club's service), but among officers and crews, more than one hundred in all, except the ill-fated *Falcon* and her company (also after her Arctic voyage was finished), no loss of life or serious accident has occurred.

A summary of the cruises of the Club's steamers is as follows:

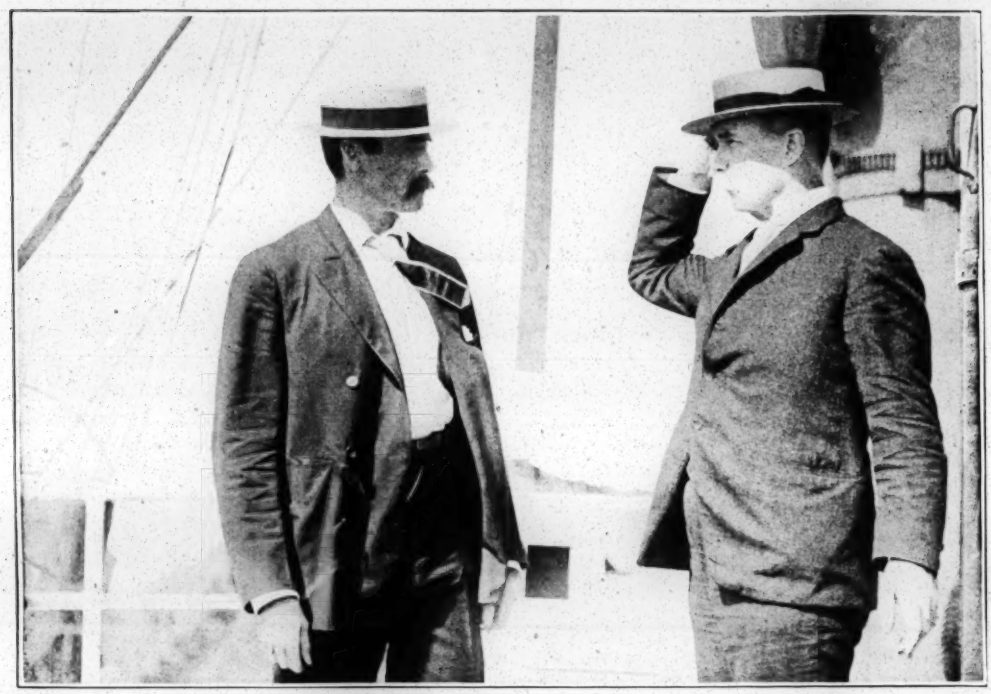
1898. *Windward,* London to New York, to Allman Bay; *Hope,* Saint Johns to Sydney, to Etah, to Saint Johns.

1899. *Diana,* Saint Johns to Sydney, to Etah, cruise in Inglefield Gulf, to Sydney, to Saint Johns; *Windward,* Allman Bay to Brigus, N. F.

1900. *Windward,* Brigus, via Saint Johns, to Sydney, to Payer Harbor, Ellesmereland.

1901. *Windward,* Payer Harbor to Saint Johns; *Erik,* Halifax to Sydney, to Etah and return.

1902. *Windward,* Saint Johns to Newburgh, N. Y., to Cape Sabine, to Sydney, to Brigus.



COMMANDER PEARY AND HERBERT L. BRIDGMAN, SECRETARY OF THE PEARY ARCTIC CLUB, SAYING FAREWELL ABOARD THE "ROOSEVELT"

1905. *Roosevelt,* Bucksport to Portland, to New York, to Sydney, to Cape Sheridan and winter quarters.
1906. *Roosevelt,* winter quarters, Cape Sheridan to Sydney and New York.
1908. *Roosevelt,* New York to Sydney and winter quarters.

Of the sledge and field work of the Club, it so far exceeds that of any other expedition that it may be fairly questioned whether it does not equal that of all combined. Six times along the ice-foot from Cape Hawkes to Fort Conger its sledges broke the way, until it resembled an open road, while Smith Sound, Robeson Channel, and Lincoln Sea were gridironed in all directions with their trails.

On the Greenland coast, delimiting for the first the northern boundary of this mysterious continent, it fixed Cape Morris K. Jesup in 1900, the highest northern land in the Western Hemisphere, and probably connected farther to the east the new land with Independence Bay, discovered by Peary six years before. The game located on this former journey also proved the salvation of the party upon their return from the farthest north, six years later. From Fort Conger north to Cape Hecla, from Cape Sheridan west, in the summer of 1906, the ice-foot afforded a path to the farthest west, whence the hitherto-unknown Crocker Land was visible, and the definite map of the Arctic Archipelago still farther extended.

Of the memorable sledge journeys across the polar pack, that of 1902, to 84.17°, highest north on the American Hemisphere, and that four years later to 87.6°, the highest north, the leader has the rightful prerogative of description; but they are recognized as among the major achievements of Arctic annals, not only in latitude attained, but in possession and exercise of those qualities which are the price of all Arctic success. The total number of miles covered by the

sledges of the Peary Arctic Club during its ten years of field work is not less than 6,800 miles.

Additions by the Club to the nomenclature of Arctic maps may be summarized as follows:

1899:
Jesup (Morris K.) Land.
Moore (Charles A.) Mountain.
Bridgman (Herbert L.) Mountain.
Benedict (Erastus C.) Glacier.
Hedin (Sven) Glacier.
Cannon (Henry W.) Cape.

1900:
Jesup (Morris K.) Cape, 1883-1890.
Bridgman (Herbert L.) Cape.
Parish (Henry) Cape.
Wyckoff (Clarence F.) Cape.
Hill (James J.) Cape.
Cannon (Henry W.) Cape.
Benedict (Henry H.) Mountains.
Daly (Charles P.) Mountains.
Constable (James M.) Bay.
Wyckoff (Edward G.) Island.
Schley (Grant B.) Fjord.
Hyde (Frederick E.) Fjord.
Sands (Hayden H.) Fjord.
Peary (Mary) Peak.
McKinley (William) Sea.
Roosevelt (Theodore) Range.

1906:
Crocker (George) Land.
Phillips (John C.) Bay.
Bourne (Fred. G.) Cape.
Colgate (James C.) Cape.
Hubbard (Thomas H.) Cape.
Kleybolte (Rudolph) Island.

In addition to its definite work on the map of the world, the Peary Arctic Club has accomplished other things hardly less important and significant. It has demonstrated the indisputable value of the Eskimo and his dog; has substituted for strained relations, friendship and loyalty, sympathy with the leader and obedience to him, so that the undertaking commands the best resources of both races; each supplements the other, and the result has demonstrated the merit of the combination. The Club has also vastly simplified the equipment and dietary of explorers; has carried far beyond any former example the rule of "living off the country." Scurvy and other evils which enfeebled and reduced earlier explorers have been practically unknown, and, utilizing the abundant supplies of the food of the country, combined with the essentials, pemmican and tea from civilization, have demonstrated what is probably the ideal Arctic food supply. Starvation upon a selected basis has been practically eliminated from the Arctic dangers.

The Peary Arctic Club has also demonstrated the advantage of a small, compact organization with direct personal responsibility, free from routine "red tape" or the semblance, without the fact, of authority. Animated by absolute sincerity of purpose, by undivided earnestness in its one great object, it believes that its example in fields of administration and coöperation are not less instructive than its achievements in the field are gratifying.

Death removed from the Club, on January 22, 1908, Morris K. Jesup, its first and only president. To Mr Jesup more than to any other man the Club owed existence, and from him it received in generous measure support, counsel, and inspiration, which sustained its work and commanded for it a definite place in public confidence and respect.

The vacancy caused by Mr Jesup's death was filled June 18, 1908, by the election of Gen. Thomas H. Hubbard, of New York, and that in the vice-presidency, by the resignation of Commander Peary, on account of his approaching departure for the North, by the election of Zenas Crane, of Dalton, Massachusetts.

The Club's steamer *Roosevelt*, fully repaired, equipped with new boilers, stronger and better than ever, left New York for the North, a second time, July 6, 1908; and, having been honored at Oyster Bay, New York, by a visit from President Roosevelt, departed from Sydney July 17, upon a quest the complete success of which the Club confidently expects Commander Peary will report in person to the Tenth International Geographic Congress.

XUM

JACK LONDON'S NEW NOVEL MARTIN EDEN

BEGINS IN THE
SEPTEMBER ISSUE OF

The Pacific Monthly

THE PACIFIC MONTHLY, of Portland, Oregon, has just purchased, for $7,000, "Jack" London's new novel, "Martin Eden." It is 142,000 words in length, and is a vivid picture of London's struggle from obscurity to success. Probably there is not a reader of the National Geographic Magazine who has not read and been thrilled by "The Call of the Wild" and the "Sea-Wolf." Every man who has red blood in his veins will read London's latest story with intense interest.

Martin Eden is a character study—the story of a fighter—a fighter as a newsboy in the alleys of San Francisco; a fighter as a rowdy in slums; and, finally, a fighter for education and culture, struggling against the odds of common birth and vulgar environment, with a desperation of courage that presents a powerful blending of brutality of strength with sublimity of purpose. His inspiration is a woman of the higher sphere of life, but his motive is the mighty impulse that animates a soul and brain born to expand until fettering ignorance is sundered and ignoble influence trampled under foot. * * It is not too much to say of "Martin Eden" that it possesses more of fascination and virility, grips the imagination and the sympathies more keenly, and imparts more of courage than any book produced in years.

THE PACIFIC MONTHLY has many other big features besides "Jack" London's story. It is typically western, and is universally recognized as the leading magazine of the West. Not only is it a high-class publication from a literary standpoint, but its artistic and beautiful pictures are making friends for it wherever it is seen.

The price of The Pacific is $1.50 a year; but to every reader of the National Geographic Magazine who will send 50 cents, in stamps or money-order, before October 31, we will send The Pacific Monthly for six months, the subscription to begin with the September number.

Fill out the following blank, and mail with stamps or money-order to The Pacific Monthly.

THE PACIFIC MONTHLY,
Portland, Oregon.

Gentlemen: Enclosed find Fifty Cents for six months' subscription to The Pacific Monthly, to begin with the September, 1908, number.

NAME .....

ADDRESS .....

N. G. M.

Your courtesy in mentioning the Magazine when writing will be appreciated

WE have a Department in connection with our Map Works for the compiling of maps to show any desired features. For map work requiring the incorporation of statistics or gazetteer information, we offer an unrivaled service.

In engraving and color printing, we do only high-grade work.

THE MATTHEWS-NORTHRUP WORKS
BUFFALO, N. Y.

New York Office
Madison Square Garden Tower
Cleveland Office
517 Citizens Building

BORDEN'S
EAGLE
BRAND CONDENSED
MILK

The Original and Leading Brand
for Infant Feeding for
Over Fifty Years

BORDEN'S CONDENSED MILK CO.
"Leaders of Quality"
Est. 1857 NEW YORK

HENRY ROMEIKE'S
BUREAU OF
PRESS CUTTINGS

¶ Reads every paper of importance published in the United States, and through its European agencies in London, Paris, Berlin and Vienna every paper of importance published in Europe and the British Colonies. One subscription on any given subject will bring notices from the United States, and if desired, also from European papers.

WRITE FOR TERMS

NEW YORK
110-112 West 26th St.

Your courtesy in mentioning the Magazine when writing will be appreciated

Classified Advertisements

Combines Dignity, Directness, and a Minimum of Expense

For Terms, Address Advertising Manager, The National Geographic Magazine, Washington, D.C.

ENGINEERING EXPERTS—MINING, MECHANICAL, ELECTRICAL, CIVIL

Coal Mines and Coal Properties Examined; will also take charge of the development and working of mines in Washington; 19 years' practical experience in Washington and Canadian coal fields.

F. A. HILL, Consulting Engineer,
609 Mutual Life Building . . Seattle, Washington
Phone, Main 432; Residence, East 741.

H. E. SMITH, Mining Engineer, Box 335, Ft. Smith, Ark. General and Secret Investigations made in the Lead and Zinc Fields of Missouri, Oklahoma, and Arkansas for non-residents.

E. M. JONES, 1125 James Bldg., Chattanooga, Tenn., Mining Engineer—reports, plans for development, and supervision of operations of coal properties. No surveys made. Experience: Penna. Anthracite Field, Penna., Maryland, W. Va., and Tenn. Soft Coal Fields.

STEPHEN E. KIEFFER, M. Am. Soc. C. E. Civil and Hydraulic Engineer. Expert solution of Water Supply and Irrigation Problems in the Arid West and Mexico. **First National Bank Building, Berkeley, California.**

CLAPP & BEE, Civil and Geological Engineers, 610 Fitzsimons Building, Pittsburg, Penna. Will undertake all kinds of surveying, mapping, prospecting, and geological work. Specially experienced with coal, gas, and oil properties and problems of water supply. **F. G. Clapp, Geologist, and A. W. Bee, Jr., Civil Engineer.**

MARTIN FISHBACK, Mining Engineer,
El Paso, Texas, U. S. A.
P. O. Box 701. Phones, 140, 788
Cable: "Fishback."
Codes: Western Union, Moreing & Neal.
Reliable examinations and reports. Plans for economic development of prospects and mines, and supervision of operations.
Special field: New Mexico, Arizona, and Mexico.
Bank references furnished and required.

LEE LATROBE BATEMAN, Consulting Engineer.
20 years experience Farming Specialist, Irrigation, Drainage, and Reclamations. Surveys and reports made on projected developments. Special Field—Louisiana and Texas Gulf Coast Region.
Address, 55 West Eighty-second St., New York City.

NORVAL J. WELSH, Mining Engineer.
Specialty—The examination, organization, and development of gold, silver, copper, and lead mining properties throughout the Republic of Mexico and the Southwest.
Terms on request.
San Antonio Club, San Antonio, Texas. **The Engineers' Club, New York, N. Y.**

PATENT ATTORNEYS

ALEXANDER & DOWELL, Attorneys at Law. Registered Solicitors of United States and Foreign Patents. Practice in all United States Courts.
607 Seventh Street . . Washington, D. C.

A BEAUTIFUL HOME

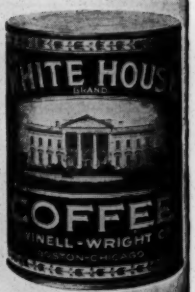
FOR SALE—$2,250.—High, on the Choptank, near Cambridge, Maryland, a well-built, well-shaded, cozy home. Beautiful views, salt bathing, fine fruit. Two acres.
For full description, address
Captain Charles McIlvaine, Cambridge, Md.

TUTOR

HOWARD C. JENNESS, A. B. (Harvard), Tutor, will prepare boys for the leading colleges, the Naval Academy, and West Point. Successful experience at Harvard. Special classes for men wishing to enter The George Washington University on certificate.
Telephone. **Apt. 41, 1723 G St., Washington, D. C.**

The Prestige of Our Splendid "WHITE HOUSE" COFFEE

Will most certainly inspire perfect confidence in our equally superb



"WHITE HOUSE" TEAS

Which are put up in ¼ & ½ lb. carefully sealed tins and warranted to give complete satisfaction.

BOTH "WHITE HOUSE" COFFEE AND "WHITE HOUSE" TEAS ARE THE PRODUCT OF THE MOST FAMOUS PLANTATIONS IN THE WORLD.

"WHITE HOUSE" TEAS ARE SOLD UNDER THESE DISTINCTIVE NAMES.

"FORMOSA OOLONG"
"BLEND"
"INDIA & CEYLON"
"ORANGE PEKOE"
"ENGLISH BREAKFAST"

The "WHITE HOUSE" brands of Tea and Coffee are packed by a most reputable concern from the most careful selections of experts of the highest skill, and for people who appreciate all that is best in the tea and coffee world. They are uniform, reliable, satisfying

"Il se Paie de Faire de Avertissements"

"Es Bezahlt Sich Annoncen zu Machen"

"Es Profittabile da Fare Avertimentos"

OR

IN PLAIN ENGLISH

"IT PAYS TO ADVERTISE"

When you know positively that you bring your business before the most intelligent and financially well-to-do people in the United States, the greatest traveling and the greatest reading class we have, people who want the best and have the wherewithal to pay for it, the value of advertising in **The National Geographic Magazine** must appeal to you.

Every copy of **The National Geographic Magazine's** 40,000 monthly edition is subscribed for direct, not purchased as a ten-minute time-killer, but contracted for by the year, **read from cover to cover and kept.**

When 40,000 copies are subscribed for it means, conservatively estimated, that the Magazine is read by at least 100,000 people every month.

When 90 per cent of its subscribers preserve and bind a magazine it certainly means its value is recognized.

Results and Pulling Power?—Certainly! Read the Following:

The Washington Loan and Trust Company

Trust Department

FRED'K EICHELBERGER, TRUST OFFICER

Washington, D. C.

The National Geographic Magazine,
Washington, D. C.

Gentlemen:

No doubt it will interest your Advertising Department to know that this Company has received a number of new accounts of marked size and importance, one of them for fifteen thousand dollars, resulting directly from our advertisement in the National Geographic Magazine.

Very respectfully, Fred'k Eichelberger

G. Trust Officer.

You, as a progressive business man, should investigate this opportunity for profit.

The cost of space is trifling when the magnificent quality of the Magazine's circulation is considered. For rates and other interesting information, write to

Advertising Manager
THE NATIONAL GEOGRAPHIC MAGAZINE
16th and M Sts., Washington, D. C.

WE PRINT THIS MAGAZINE

JUDD & DETWEILER, Inc.

PRINTERS

of BOOKS, CATALOGS
Etc. ¶A SPECIALTY *of*
BRIEFS *and* RECORDS

420-422 Eleventh St. N. W.

WASHINGTON, D. C.

OUT-OF-TOWN WORK SOLICITED

SPRATT'S DOG CAKES

ARE THE BEST AND CHEAPEST

Send for FREE Catalogue, "Dog Culture," which contains practical chapters on the feeding, kenneling, and general management of dogs, also chapters on cats

SPRATT'S PATENT

(AM.) LTD.

Newark, N. J.
San Francisco, Cal.
Boston, Mass.
St. Louis, Mo.
Cleveland, Ohio
Montreal, Can.

THE WASHINGTON LOAN AND TRUST COMPANY

WASHINGTON, D. C.

Capital	$1,000,000.00
Surplus and Profits .	$750,000.00

INTEREST PAID ON DEPOSITS SUBJECT TO CHECK
LOANS MADE ON REAL ESTATE AND COLLATERAL
SAFE DEPOSIT BOXES
REAL ESTATE DEPARTMENT
TRUST DEPARTMENT
ACTS AS EXECUTOR, ADMINISTRATOR, TRUSTEE, Etc.
LETTERS OF CREDIT AND FOREIGN EXCHANGE

JOHN JOY EDSON,
President

WOODWARD & LOTHROP

Importers and Retailers

INVITE ATTENTION TO THEIR SELECTIONS AND IMPORTATIONS IN DESIRABLE MERCHANDISE, COMPRISING IN PART

Paris and London Millinery, Silks, Velvets, High-class Dress Goods, Ready-to-wear Outer and Under Garments for Men, Women, Girls, and Boys, Hand-made Paris Lingerie, Bridal Trousseaux, Corsets, Infants' Outfittings, Hosiery, Laces, Ribbons, Handkerchiefs, Embroideries, Linens, Upholstery Goods, Books, Stationery, Card Engraving; also Paris, Vienna, and Berlin Novelties in Leather and Fancy Goods; Sterling Silver Articles, Lamps, Clocks, Bronzes, Cut Glass, China, etc., for Wedding, Birthday, and Anniversary Gifts.

Mail Orders Receive Prompt Attention Correspondence Solicited

10TH, 11TH, F, AND G STREETS N. W.

WASHINGTON, D. C.

PRESS OF JUDD & DETWEILER, INC., WASHINGTON, D. C.